No. 6332.

United States Court of Appeals
For the First Circuit

NEW ENGLAND ELECTRIC SYSTEM ET AL.,

PETITIONERS,

v.

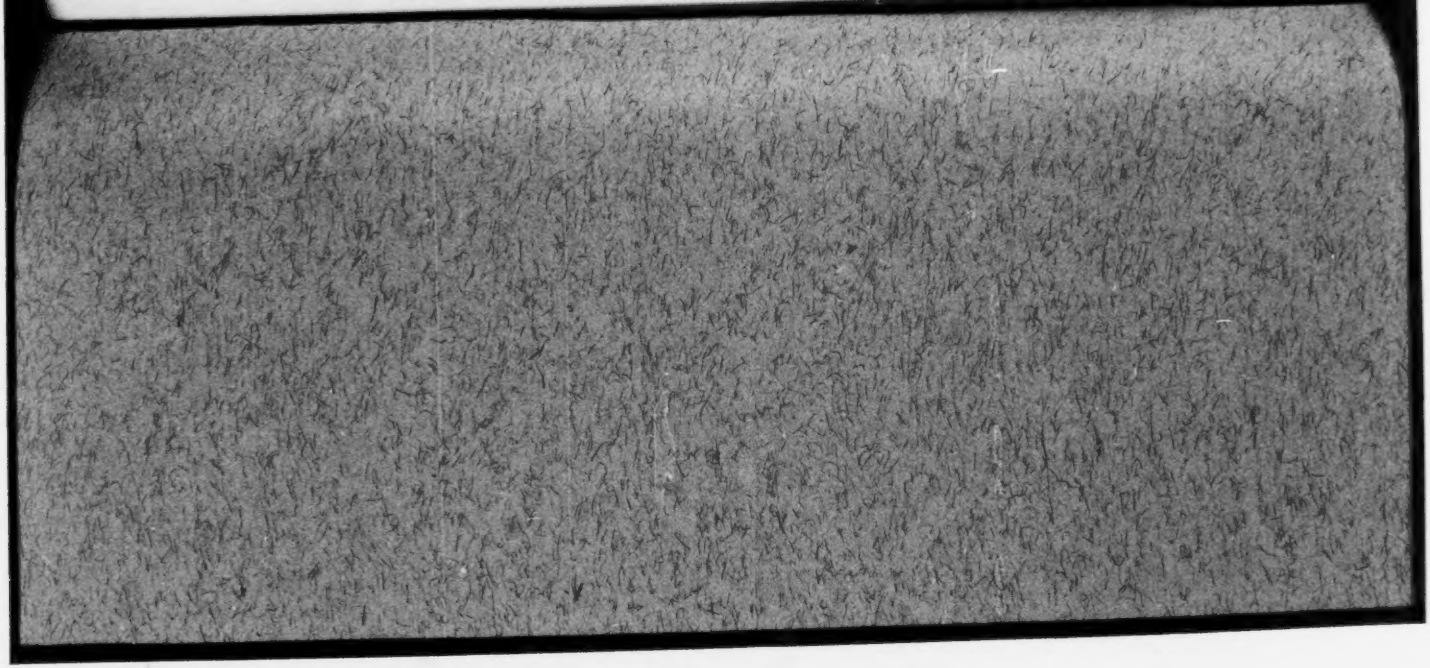
SECURITIES AND EXCHANGE COMMISSION,

RESPONDENT.

RECORD APPENDIX
TO
BRIEF FOR PETITIONERS

VOLUME III
Exhibits
(Pages 1297 - 1454)

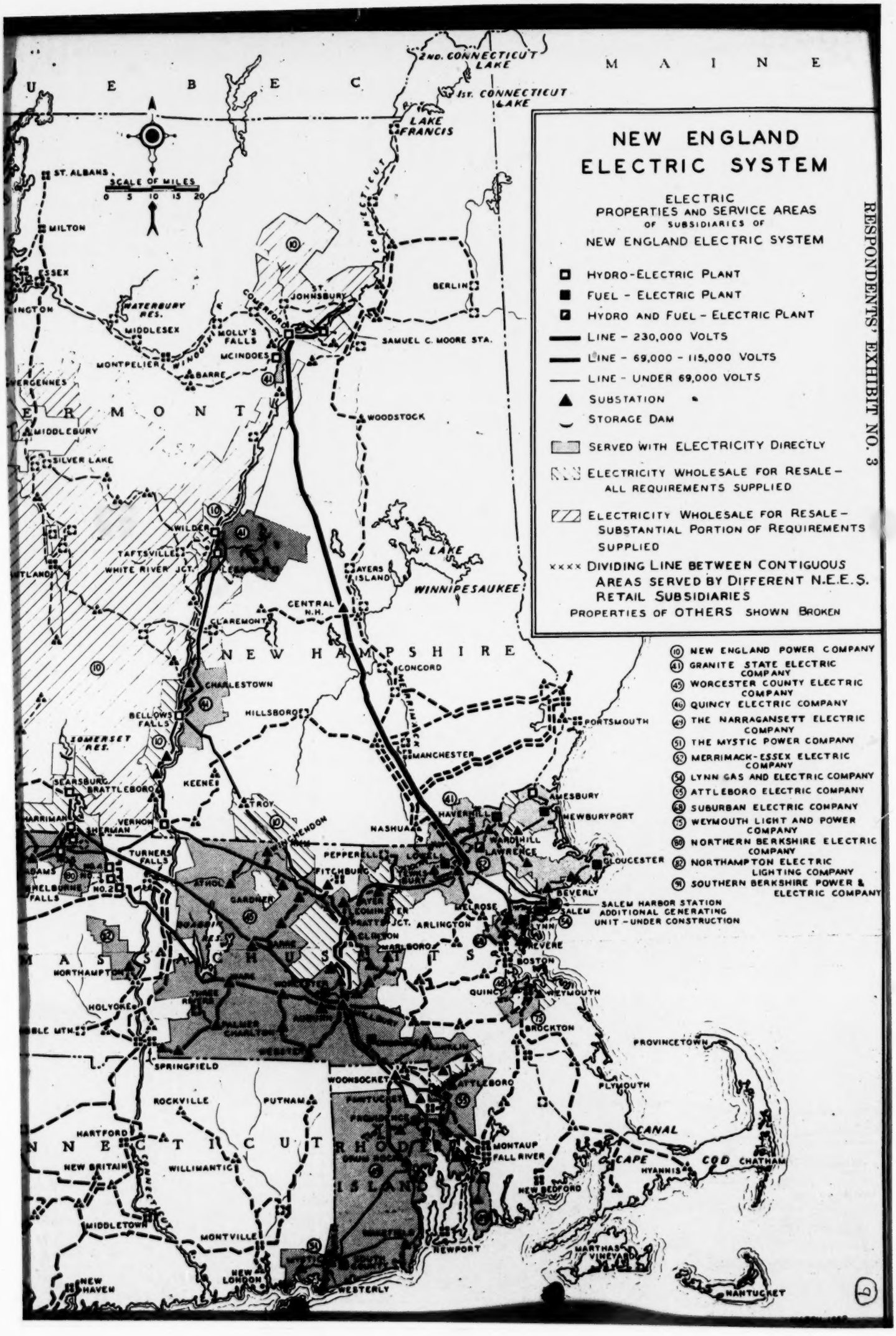
Blanchard Press, Inc., Boston, Mass. — Law Printers



INDEX

VOLUME III

ADDITION TO VOLUME III



RESPONDENTS' EXHIBIT NO. 3

RESPONDENTS' EXHIBIT NO. 50

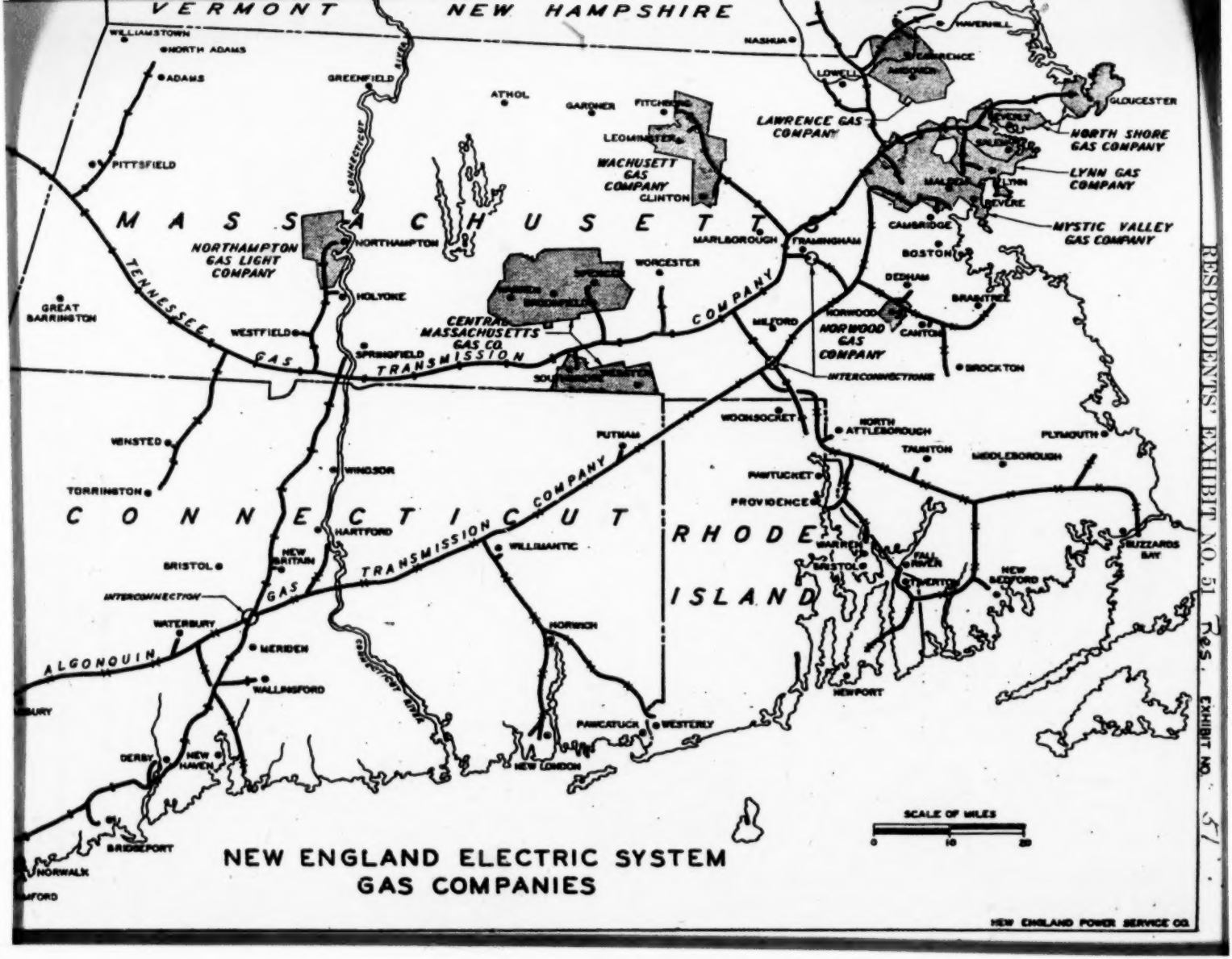
SUBSIDIARIES OF NEW ENGLAND ELECTRIC SYSTEM AT APRIL 1, 1960

	Common Stock Ownership
Straight Electric Companies	
Attleboro Electric Company	100.00%
Granite State Electric Company	100.00
Lynn Electric Company	93.76
Merrimack-Essex Electric Company	100.00
The Mystic Power Company	100.00
The Narragansett Electric Company	100.00
New England Power Company (a)	100.00
Northampton Electric Lighting Company	100.00
Northern Berkshire Electric Company	100.00
Quincy Electric Company	100.00
Southern Berkshire Power & Electric Company	100.00
Suburban Electric Company	100.00
Weymouth Light and Power Company	100.00
Worcester County Electric Company	100.00
Straight Gas Companies	
Central Massachusetts Gas Company	100.00
Lawrence Gas Company	90.43
Lynn Gas Company	93.76
Mystic Valley Gas Company	99.41
North Shore Gas Company	97.52
Northampton Gas Light Company	100.00
Norwood Gas Company	99.38
Wachusett Gas Company	100.00

SERVICE COMPANY

New England Power Service Company 100.00

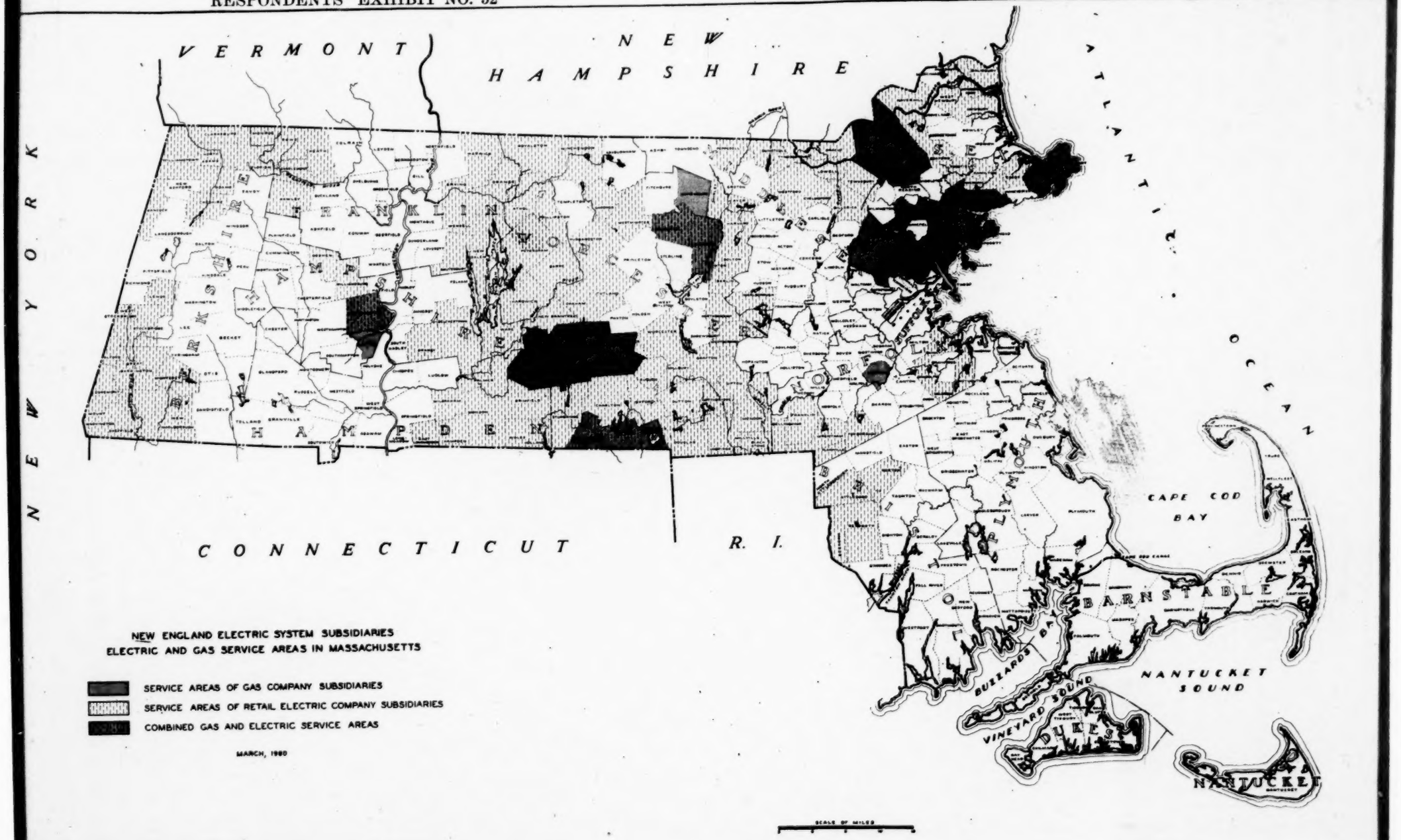
(a) New England Power Company owns 30% of the common stock of Yankee Atomic Electric Company.



RESPONDENTS' EXHIBIT NO. 51 Res. EXHIBIT NO. 51

RESPONDENTS' EXHIBIT NO. 52

Pet. EXHIBIT NO.

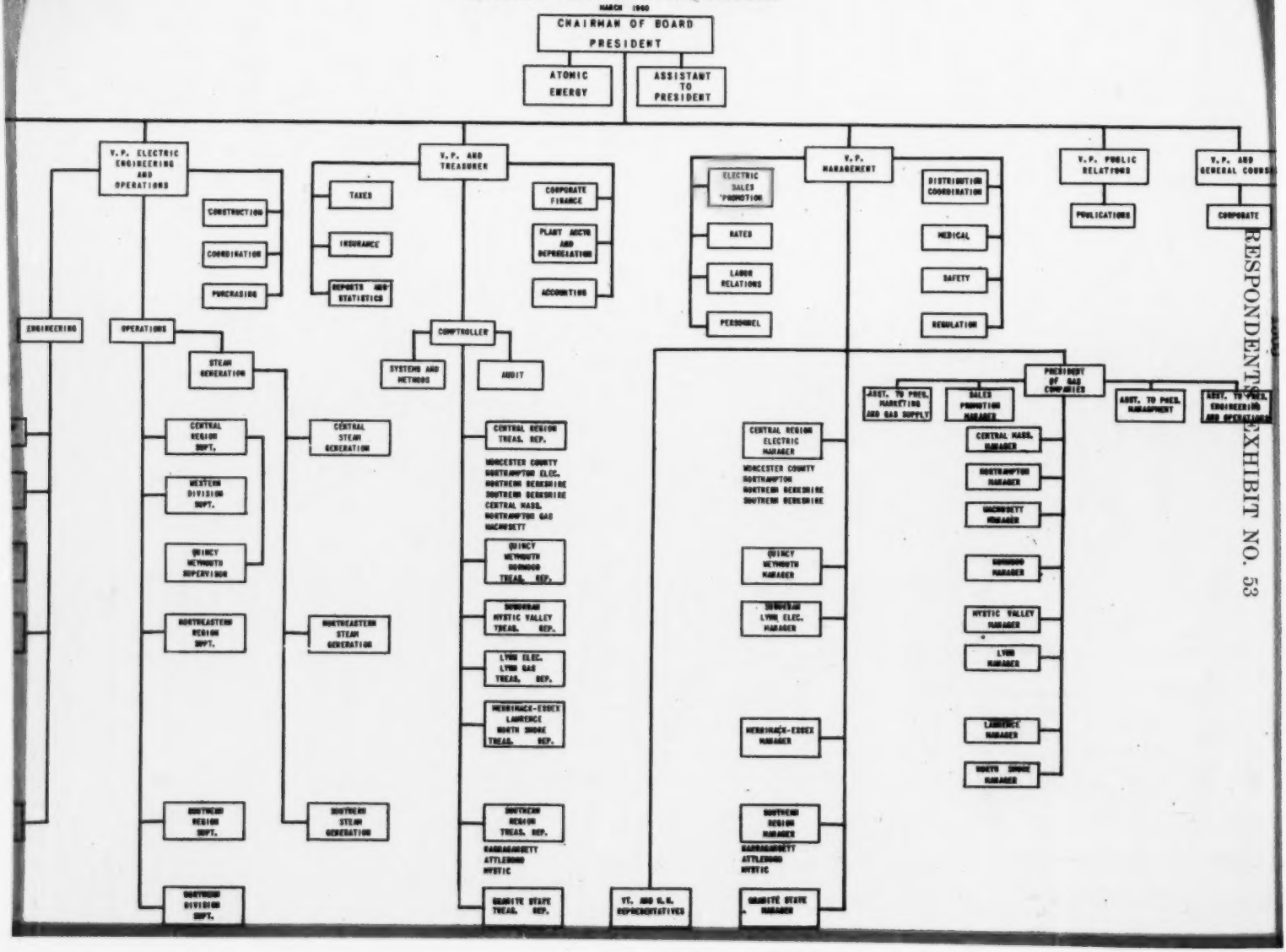


NEW ENGLAND ELECTRIC SYSTEM

HOLDING COMPANY SYSTEM

FUNCTIONAL ORGANIZATION CHART
ELECTRIC AND GAS OPERATIONS

MARCH 1960



RESPONDENTS EXHIBIT NO. 53

RESPONDENTS' EXHIBIT NO. 54

Res. Exhibit No. 54

NEW ENGLAND ELECTRIC SYSTEM
AND
NEW ENGLAND POWER SERVICE COMPANY
OFFICERS AND DIRECTORS
AT APRIL 1, 1960

OFFICERS	NEW ENGLAND ELECTRIC SYSTEM	NEW ENGLAND POWER SERVICE COMPANY
Chairman of Board	Irwin L. Moore	Irwin L. Moore
President	William Webster	William Webster
Vice President and Treasurer	Harry Hanson	Harry Hanson
Vice President and General Counsel	Leeds A. Wheeler	Leeds A. Wheeler
Vice Presidents	John I. Ahern Robert F. Krause	John I. Ahern R. Leigh FitzGerald Thomas J. Flanagan Chandler W. Jones Robert F. Krause Howard G. Lasselle Claude D. Lawrence Elmer H. Lother Walter P. O'Neil Gustave A. Schoenbucher John E. Teagan Edward F. Ziegler
Assistant Vice Presidents		Albert Calvert John J. Foley Clifford Hartley
Assistant Treasurers	Albert E. Westwood	Howard E. Needham Fritz A. Ohrn Albert E. Westwood
Secretary	R. Leigh FitzGerald	—
Clerk and Secretary		Richard B. Dunn
Assistant Secretaries	Joseph X. Corbett Albert E. Westwood	John E. Teagan
Assistant Clerk		Joseph X. Corbett
Comptroller		Elmer H. Lother
DIRECTORS - EMPLOYEES	Carl S. Herrmann Irwin L. Moore William Webster	John I. Ahern Harry Hanson Chandler W. Jones Robert F. Krause Irwin L. Moore William Webster Leeds A. Wheeler
DIRECTORS - OTHER	George F. Bennett Howard W. Cole Charles A. Coolidge Deane C. Davis Paris Fletcher Henry J. McCarthy John H. McMahon Robert H. Montgomery	None

Res. Exhibit No. 55

NEW ENGLAND ELECTRIC SYSTEM
OFFICERS AND DIRECTORS OF GAS SUBSIDIARIES
AT APRIL 1, 1960

	President Treasurer	Vice Presidents	Directors: Employees	Directors: Other
CENTRAL MASS. GAS CO.	Dalbeck Hanson Cutcliffe(1)	Langan	Dalbeck Langan B. Smith*	
NORTHAMPTON GAS LIGHT CO.	Dalbeck Hanson Cutcliffe(1)	Schofield,Jr.	Cutcliffe Dalbeck Schofield,Jr. B. Smith*	E. L. Ar C. N. Da J. H. Fi
WACHUSETT GAS CO.	Dalbeck Hanson Cutcliffe(1)	Magnitzky	Dalbeck Magnitzky B. Smith*	
NORWOOD GAS CO.	Dalbeck Hanson Kenefick(1)	Tyler	Dalbeck Kenefick Rodgers* B. Smith* Tyler	
MYSTIC VALLEY GAS CO.	Dalbeck Hanson Otten(1)	Bryant Murray	Bryant Dalbeck Kennedy Murray Otten	R. Johns H. C. O A. Yea
LYNN GAS CO.	Dalbeck Devitt	Fite,Jr.	Dalbeck Devitt Fite,Jr. Kennedy Murray	
LAWRENCE GAS CO.	Dalbeck Hanson Macaulay(1)	Maguire	Culver* Dalbeck Macaulay Maguire	
NORTH SHORE GAS CO.	Dalbeck Hanson Macaulay(1)	Rainville,Jr.	Dalbeck Macaulay Macauley Rainville,Jr.	F. E. B R. K. P C. C. P

(1) Assistant Treasurer and Treasury Representative

Pes. Exhibit No. 56

NEW ENGLAND ELECTRIC SYSTEM
OFFICERS AND DIRECTORS OF ELECTRIC SUBSIDIARIES
AT APRIL 1, 1960

	President Treasurer	Vice Presidents		Directors: Employees of System Subsidiaries		Directors: Other	
ENGLAND POWER CO.	Herrmann (Chrm.) Moore Hanson	Barstow Brandt Coe Crabtree	Jones Joslin Nelson Rouner	Allen Barstow Brandt Crabtree Herrmann	Jones Moore Nelson Pope* Webster	R. E. Farwell P. H. Page H. C. Rice	
...TON COUNTY ELECTRIC CO.	Smith Hanson Cutcliffe (1)	Butler Secord Costello (2)	Kennedy (2) Leach (2) Van Rye (2)	Herrmann Moore Secord Smith		B. H. Bristol C. R. Brownell C. Bullock C. T. Daley R. N. Greenwood M. C. Jaquith	O. J. Laliberte W. A. Loughlin M. A. Moore P. R. O'Connell A. W. Rice
...PTON ELECTRIC LIGHTING CO.	Smith Hanson Cutcliffe (1)	Butler Fish		Butler Cutcliffe	Fish Smith	E. L. Arnold C. N. DeRose	J. H. Finn
...RN BERKSHIRE ELECTRIC CO.	Pierce Hanson Cutcliffe (1)	Ahern Butler Smith		Butler Cutcliffe Marchant* Meehan*	Neville O'Connor Pierce Smith	E. H. Arnold H. B. Clark H. J. Guild W. A. O'Hearn	
...SHIRE POWER & ELEC. CO.	Smith Hanson Cutcliffe (1)	Butler Nichols		Ahern Butler Cutcliffe	Nichols Smith		
...ELECTRIC CO.	Parsons Hanson Kenefick (1)	Flynt		Donsila Flynt Parsons	Perry* Walshe	J. W. Kapples W. J. Martin	
...H LIGHT AND POWER CO.	Perry (Chrm.) Parsons Hanson Kenefick (1)	Flynt		Coleman* Flynt Leary*	Parsons Perry* Walshe	O. L. Barnes A. Final M. E. Young	
...N ELECTRIC CO.	Ayer Hanson Otten (1)	Pulsifer		Adams Ayer Chase	Moore Otten Pulsifer	O. T. Bergstrom I. S. Hall R. C. Tenney	
...ELECTRIC CO.	Ayer Devitt	FitzGerald		Ayer Coleman* Cook*	Kelley*	T. D. Chatfield M. P. Clough, Jr. H. L. Huxtable	T. W. Rogers C. F. Smith, Jr.
...BACK-ESSEX ELECTRIC CO.	Bower Hanson Macaulay (1)	Casey Hickey Holcomb	Hunt Leddy Pike, Jr.	Bower Casey Hickey Holcomb	Leddy Nickerson* Pike, Jr.	H. W. Bourgeois F. E. Brophy J. P. Donahue I. S. Hall R. W. Knight W. W. Kurth	W. J. MacInnes R. K. Patch C. C. Pope C. M. Runels R. C. Tenney
...MANSIT ELECTRIC CO., THE	Twohey Ringler	Cabot Clarke Kelley		Cabot Krauss Twohey Webster		T. F. Black, Jr. Z. R. Bliss W. T. Brightman, Jr. M. G. Chace, Jr. R. J. Goodnow	E. A. Kingman N. D. MacLeod J. W. McCormick F. A. Mirando
...O ELECTRIC CO.	Twohey Hanson Ringler (1)	Fisher		Allen Canning* Fisher	Ringler Twohey	V. R. Glencross F. V. Murphy, Jr.	L. B. Smith F. L. Wetherell
...POWER CO., THE	Cabot Ringler	Twohey		Cabot Clarke Lasarek	Lloyd Twohey	J. H. Bindloss A. M. Gildersleeve	J. Rossie
...STATE ELECTRIC CO.	Bailey Couser	FitzGerald		Bailey Couser FitzGerald		H. C. Edgerton F. F. Hough L. B. Peever M. D. Williams	

(1) Assistant Treasurer and Treasury Representative
(2) Assistant Vice President

* Retired

COMPARATIVE DATA FOR 25 LARGE COMBINATION GAS AND ELECTRIC UTILITIES AND SYSTEMS FOR THE YEAR 1958

ARRANGED IN ACCORDANCE WITH THEIR GAS OPERATING REVENUES

	GAS		ELECTRIC		Approximate Area Served Square Miles	
	Number of Customers Thousands	Operating Revenue Thousands	Number of Customers Thousands	Operating Revenue Thousands	ELECTRIC	GAS
Pacific Gas and Electric Company	1,566	$205,334	1,848	$351,758	94,000	
Public Service Electric and Gas Co.	1,112	115,000	1,372	229,034	1,400	2,000
Consolidated Edison Co. of New York	1,318	90,388	2,799	456,458	600	400
Consumers Power Company	484	76,389	843	150,163	26,863	5,619
Niagara Mohawk Power Corporation	350	57,250	1,087	206,613	22,600	3,700
The Cincinnati Gas and Electric Co.	299	52,545	409	75,298	2,636	351
Baltimore Gas and Electric Co.	381	47,932	525	103,031	2,283	365
Public Service Co. of Colorado	290	44,969	314	51,126	16,000	NA
Northern Indiana Public Service Co.	270	38,516	254	53,600	12,000	
Philadelphia Electric Company	221	37,923	1,046	203,617	2,255	1,144
The Dayton Power and Light Company	188	29,553	260	51,058	6,041	
Long Island Lighting Co.	311	29,335	540	90,305	1,230	
Illinois Power Company	186	23,674	348	67,671	15,000	NA
New England Gas and Electric Assoc.	171	23,358	148	25,895	1,052	874
New England Electric System (1)	244	23,276	815	143,684	4,585	750
Rochester Gas and Electric Co.	150	23,147	197	37,792	1,953	690
Louisville Gas and Electric Co.	154	22,686	186	38,643	700	
Northern States Power Co.	155	21,680	677	131,344	40,410	
Iowa-Illinois Gas and Electric Co.	126	21,077	109	22,557	1,350	NA
Middle South Utilities, Incorp.	258	19,965	874	155,069	80,000	
New York State Electric and Gas Corp.	99	19,636	451	77,690	16,400	1,100
Kansas Power and Light Co.	94	17,796	179	32,982	27,500	
San Diego Gas & Electric Co.	235	17,745	293	41,607	3,767	3,630
Central Illinois Light Co.	99	14,670	119	23,159	2,590	120
Arizona Public Service Co.	170	14,491	162	42,152	40,000	
(1) New England Electric System for 1959 (excluding gas operations of Narr. Elec.)	237	24,939	824	147,071	4,585	661

NA - Not Available

Source of Data: Annual Reports, Annual Statistical Reports to E.E.I., Moody's Public Utility Manual.

Res. Exhibit No. 57

NEW ENGLAND ELECTRIC SYSTEM

Adjustments to Statements of Income
of Eight Massachusetts Gas Companies Owned by NEES
Caused by Severance of Gas Business

Twelve Months ended December 31, 1958

	Central Massachusetts Gas Company	Lawrence Gas Company	Lynn Gas and Electric Company-Gas Department	Mystic Valley Gas Company	North Shore Gas Company	Northampton Gas Light Company	Norwood Gas Company	Wachusett Gas Company	Eight Massachusetts Gas Company Total
	$	$	$	$	$	$	$	$	$
Operating Revenues									
Sales of Gas	-	-	-	-	-	-	-	-	-
Other	(800)	(1,200)	2,100	(3,000)	(18,500)	(23,400)	-	-	(44,800)
Total Operating Revenues	(800)	(1,200)	2,100	(3,000)	(18,500)	(23,400)	-	-	(44,800)
Operating Revenue Deductions									
Operating Expenses	97,400	195,300	336,900	396,100	157,100	76,500	30,100	96,800	1,385,800
Depreciation	2,500	3,500	5,200	7,000	2,000	1,500	500	3,000	25,200
Taxes - Other than Federal Income	1,000	2,800	26,000	4,600	1,800	800	300	1,400	38,700
Total of above Operating Revenue Deductions	100,900	201,600	367,700	407,700	160,900	78,800	30,900	101,200	1,449,700
Net	(101,700)	(202,800)	(365,600)	(410,700)	(179,400)	(102,200)	(30,900)	(101,200)	(1,494,500)
Nonoperating Income	(800)	(6,800)	(1,700)	1,000	4,800	(700)	1,000	2,700	(500)
Gross Income before Federal Income Tax	(102,500)	(209,600)	(367,300)	(409,700)	(174,600)	(102,900)	(29,900)	(98,500)	(1,495,000)
Federal Income Tax									
On Separate Return Basis	(50,800)	(103,900)	(182,100)	(203,100)	(86,500)	(51,000)	(14,800)	(48,800)	(741,000)
Reduction due to Participation in NEES Consolidated Return	63,800	20,400	26,100	66,500	21,500	2,100	-	3,200	203,600
Federal Income Tax	13,000	(83,500)	(156,000)	(136,600)	(65,000)	(48,900)	(14,800)	(45,600)	(537,400)
Gross Income before Interest and Dividends	(115,500)	(126,100)	(211,300)	(273,100)	(109,600)	(54,000)	(15,100)	(52,900)	(957,600)

( ) Indicates red figure

Pet. Ex. No. 11

NEW ENGLAND ELECTRIC SYSTEM

Adjustments to Statements of Income
of Eight Massachusetts Gas Companies Owned by NEES
Caused by Severance of Gas Business

Twelve Months ended December 31, 1959

	Central Massachusetts Gas Company	Lawrence Gas Company	Lynn Gas and Electric Company-Gas Department	Mystic Valley Gas Company	North Shore Gas Company	Northampton Gas Light Company	Norwood Gas Company	Wachusett Gas Company	Eight Massachusetts Gas Company Total
	$	$	$	$	$	$	$	$	$
Operating Revenues	-	-	-	-	-	-	-	-	-
Sales of Gas	(800)	(1,200)	2,100	(3,000)	(18,500)	(23,400)	-	-	(44,800)
Other									
Total Operating Revenues	(800)	(1,200)	2,100	(3,000)	(18,500)	(23,400)	-	-	(44,800)
Operating Revenue Deductions									
Operating Expenses	101,600	201,800	350,900	413,800	164,100	79,300	31,500	102,100	1,445,100
Depreciation	2,500	3,500	5,200	7,000	2,000	1,500	500	3,000	25,200
Taxes - Other than Federal Income	1,100	2,900	26,200	4,800	1,900	900	300	1,500	39,600
Total of above Operating Revenue Deductions	105,200	208,200	382,300	425,600	168,000	81,700	32,300	106,600	1,509,900
Net	(106,000)	(209,400)	(380,200)	(428,600)	(186,500)	(105,100)	(32,300)	(106,600)	(1,554,700)
Nonoperating Income	(800)	(6,800)	(1,800)	1,000	5,100	(700)	1,000	2,700	(300)
Gross Income before Federal Income Tax	(106,800)	(216,200)	(382,000)	(427,600)	(181,400)	(105,800)	(31,300)	(103,900)	(1,555,000)
Federal Income Tax									
On Separate Return Basis	(52,900)	(107,200)	(189,300)	(211,900)	(89,900)	(52,400)	(15,500)	(51,500)	(770,600)
Reduction due to Participation in NEES Consolidated Return	7,700	24,600	19,900	72,800	25,200	3,500	800	3,200	157,700
Federal Income Tax	(45,200)	(82,600)	(169,400)	(139,100)	(64,700)	(48,900)	(14,700)	(48,300)	(612,900)
Gross Income before Interest and Dividends	(61,600)	(133,600)	(212,600)	(288,900)	(116,700)	(56,900)	(16,600)	(55,600)	(942,100)

( ) Indicates red figure

NEW ENGLAND ELECTRIC SYSTEM

Adjustments to Statements of Income
of Fourteen Electric Companies Owned by N.E.E.S.
Caused by Severance of the Massachusetts Gas Business

Twelve Months Ended December 31, 1958

	Lynn Gas and Electric Company - Electric Department	Merrimack-Essex Electric Company	Northampton Electric Lighting Company	Suburban Electric Company	Worcester County Electric Company	Attleboro Electric Company	Granite State Electric Company	Mystic Power Company, The	Narragansett Electric Company, The	New England Power Company	Northern Berkshire Electric Company	Quincy Electric Company	Southern Berkshire Power & Electric Company	Weymouth Light and Power Company	Fourteen Electric Company Total
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Operating Revenues															
Sales of Electric Energy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	(2,100)	(38,200)	-	(61,700)	(22,000)	-	-	-	-	-	-	-	-	-	(124,000)
Total Operating Revenue	(2,100)	(38,200)	-	(61,700)	(22,000)	-	-	-	-	-	-	-	-	-	(124,000)
Operating Revenue Deductions															
Operating Expenses	147,500	119,500	34,900	221,500	70,600	1,600	1,000	600	18,600	27,600	4,200	11,800	2,100	1,900	663,400
Depreciation	2,300	1,500	1,000	2,500	-	-	-	-	-	-	-	-	-	-	7,300
Taxes - Other than Federal Income	(11,100)	1,400	400	2,100	(200)	-	-	-	-	-	-	-	-	-	(7,400)
Total of above Operating Revenue Deductions	138,700	122,400	36,300	226,100	70,400	1,600	1,000	600	18,600	27,600	4,200	11,800	2,100	1,900	663,300
Net	(140,800)	(160,600)	(36,300)	(287,800)	(92,400)	(1,600)	(1,000)	(600)	(18,600)	(27,600)	(4,200)	(11,800)	(2,100)	(1,900)	(787,300)
Nonoperating Income	(1,100)	(1,900)	(2,600)	(7,200)	(4,700)	-	-	-	-	-	-	-	-	-	(17,500)
Gross Income before Federal Income Tax	(141,900)	(162,500)	(38,900)	(295,000)	(97,100)	(1,600)	(1,000)	(600)	(18,600)	(27,600)	(4,200)	(11,800)	(2,100)	(1,900)	(804,800)
Federal Income Tax	(75,800)	(86,300)	(18,300)	(141,600)	(83,400)	(5,600)	(4,100)	(2,100)	(69,700)	(151,400)	(4,300)	(5,800)	(500)	(3,500)	(652,400)
Gross Income before Interest and Dividends	(66,100)	(76,200)	(20,600)	(153,400)	(13,700)	4,000	3,100	1,500	51,100	123,800	100	(6,000)	(1,600)	1,600	(152,400)

( ) Indicates red figure

NEW ENGLAND ELECTRIC SYSTEM

Adjustments to Statements of Income
of Fourteen Electric Companies Owned by N.E.E.S.
Caused by Severance of the Massachusetts Gas Business

Twelve Months Ended December 31, 1972

	Lynn Gas and Electric Company - Electric Department	Merrimack-Essex Electric Company	Northampton Electric Lighting Company	Suburban Electric Company	Worcester County Electric Company	Attleboro Electric Company	Granite State Electric Company	Mystic Power Company, The	Narragansett Electric Company, The	New England Power Company	Northern Berkshire Electric Company	Quincy Electric Company	Southern Berkshire Power & Electric Company	Weymouth Light and Power Company	Fourteen Electric Company Total
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Operating Revenues	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sales of Electric Energy	(2,100)	(38,200)	-	(61,700)	(22,000)	-	-	-	-	-	-	-	-	-	(124,000)
Other															(124,000)
Total Operating Revenue	(2,100)	(38,200)	-	(61,700)	(22,000)	-	-	-	-	-	-	-	-	-	
Operating Revenue Deductions															
Operating Expenses	153,100	124,700	35,900	229,800	73,500	1,600	1,900	600	18,600	27,600	4,200	11,800	2,100	1,900	681,400
Depreciation	2,300	1,500	1,000	2,500	-	-	-	-	-	-	-	-	-	-	7,300
Taxes - Other than Federal Income	(11,200)	1,500	400	2,100	(200)	-	-	-	-	-	-	-	-	-	(7,400)
Total of above Operating Revenue Deductions	144,200	127,700	37,300	234,400	73,300	1,600	1,900	600	18,600	27,600	4,200	11,800	2,100	1,900	681,300
Net	(146,300)	(165,900)	(37,300)	(296,100)	(93,300)	(1,600)	(1,900)	(600)	(18,600)	(27,600)	(4,200)	(11,800)	(2,100)	(1,900)	(806,300)
Nonoperating Income	(1,100)	(1,900)	(2,600)	(7,600)	(4,700)	-	-	-	-	-	-	-	-	-	(27,700)
Gross Income before Federal Income Tax	(147,400)	(167,800)	(39,900)	(303,700)	(98,000)	(1,600)	(1,900)	(600)	(18,600)	(27,600)	(4,200)	(11,800)	(2,100)	(1,900)	(826,000)
Federal Income Tax	(77,200)	(105,900)	(19,200)	(143,700)	(88,700)	(6,000)	(4,500)	(2,400)	(52,000)	(96,600)	(5,900)	(8,300)	(2,700)	(500)	(615,500)
Gross Income before Interest and Dividends	(70,200)	(61,900)	(20,700)	(159,800)	(9,300)	4,400	3,500	1,800	35,400	69,000	1,700	(3,500)	600	(1,400)	(210,400)

() Indicates red figure

GAS UNBUNDLING
NATURAL GAS PURCHASE CONTRACTS

NATURAL GAS PURCHASE CONTRACTS

Company	Take Point	Supplier	Authorized Quantity MCF: General Service	Interim Service	Winter Service	Emergency Service	Contract Termination Date
entral Mass. Gas. Co.	Southbridge	TGT	2,900				Dec. 5, 1971
		TGT		596			Oct. 31, 1960
	Spencer	TGT	1,826				Dec. 5, 1971
wrence Gas Co.	Methuen	TGT	8,100				March 2, 1972
		TGT		2,496			Oct. 31, 1960
ynn Gas Co.	Lynn	TGT	7,296				Nov. 23, 1971
		TGT		1,869			Oct. 31, 1960
ystic Valley Gas Co.	Arlington)	TGT	36,900				April 16, 1972
	Reading)	TGT		6,012			Oct. 31, 1960
	Revere)	AGT				24,000	Oct. 31, 1973
	Lexington)						
rth Shore Gas Co.	Danvers	TGT	10,800				March 24, 1972
		TGT		1,187			Oct. 31, 1960
	Gloucester	TGT	1,800				Sept. 7, 1972
		TGT		483			Oct. 31, 1960
rthampton Gas Lt. Co.	Northampton	TGT	2,300				Dec. 13, 1971
		TGT		576			Oct. 31, 1960
rwood Gas Co.	Norwood	AGT	1,300				Sept. 1, 1978
		AGT			1,011*		Nov. 16, 1978
chusett Gas Co.	Leominster	TGT	2,800				July 27, 1972
		TGT		462			Oct. 31, 1960
	Clinton	TGT	1,300				July 29, 1972
Total		TGT	76,022	13,681	-	-	
		AGT	1,300	-	1,011	24,000	
GRAND TOTAL			77,322	13,681	1,011	24,000	

* Winter Service Application of Algonquin Gas Transmission Company, Docket G-18970, is subject to hearing and order of Federal Power Commission.

NEW ENGLAND ELECTRIC SYSTEM

GAS SUBSIDIARIES

GAS PRODUCTION PLANTS

Company and Location	Type	Daily Plant Capacity-MCF
Central Mass. Gas Co.		
Southbridge, Mass.	L.P. - Air gas	1,500
Lawrence Gas Co.		
Lawrence, Mass.	Oil gas	2,200
Lawrence, Mass.	L.P. - Air gas	2,250
		4,450
Lynn Gas Co.		
Lynn, Mass.	Oil gas	7,800
Mystic Valley Gas Co.		
Malden, Mass.	Oil gas	11,800
Malden, Mass.	L.P. - Air gas	6,750
Reading, Mass.	L.P. - Air gas	4,500
		23,050
North Shore Gas Co.		
Salem, Mass.	Oil gas	5,650
Salem, Mass.	L.P. - Air gas	1,500
Danvers, Mass.	L.P. - Air gas	2,250
Gloucester, Mass.	L.P. - Air gas	1,500
		10,900
Northampton Gas Light Co.		
Northampton, Mass.	Oil gas	1,100
Norwood Gas Co.		
Norwood, Mass.	L.P. - Air gas	1,500
Wachusett Gas Co.		
Leominster, Mass.	L.P. - Air gas	1,500
GRAND TOTAL	Oil gas	28,550
	L.P. - Air gas	23,250
		51,800

Note: L.P. Air gas plant ratings are on basis of using 1/3 of storage per day.

GAS SUBSIDIARIES

GAS PURCHASED AND PRODUCED - 1959

	MCF PURCHASED			MCF PRODUCED			GRAND TOTAL
	General	Peak Service	Total	Oil Gas	LP Air	Total	
Mystic Valley	4,984,462	227,836	5,212,298	13,409	5,361	18,770	5,231,068
North Shore	1,669,787	66,146	1,735,933	5,236	4,950	10,186	1,746,119
Lynn	2,313,766	96,836	2,410,602	35,962		35,962	2,446,564
Lawrence	2,028,233	122,067	2,150,300	7,558	3,880	11,438	2,161,738
Central Mass.	767,620	20,952	788,572		1,723	1,723	790,295
Wachusett	395,447	18,158	413,605		2,406	2,406	416,011
Northampton	457,426	37,980	495,406	2,891		2,891	498,297
Norwood	262,274	4,333	266,607		3,209	3,209	269,816
Total	12,879,015	594,308	13,473,323	65,056	21,529	86,585	13,559,908

RESPONDENTS' EXHIBIT NO. 65

DESCRIPTION OF PRODUCTION AND DISTRIBUTION FACILITIES OF NEES SYSTEM GAS COMPANIES

Central Massachusetts Gas Company

The Central Massachusetts Gas Company franchise area and gas properties are divided into two operating districts, each supplied separately from the Tennessee Gas Transmission Company's system and otherwise isolated from each other.

The main system, the Southbridge-Webster division, receives natural gas in Southbridge at Sandersdale at a point on the high pressure line connecting Southbridge with Webster. At this point, in addition to the take station, there is located a high pressure L.P. Air gas plant with a capacity of 100 MCF per hour or 2400 MCF per day of 1000 Btu equivalent gas at 75 psig, and 50,000 gallons of propane storage. During peak-shaving periods this plant normally produces L.P. Air gas which is mixed with the incoming natural gas and distributed directly through a high pressure line west to Southbridge and east to Webster for local distribution from those centers. Normal peak-shaving operation is limited to a 50% mixture of L.P. Air gas with natural gas by the interchangeability characteristics of the two gases. Full propane storage is equivalent to 4600 MCF of 1000 Btu equivalent gas. Under emergency conditions or complete failure of the natural gas supply, the L.P. Air gas plant plus the holders at Southbridge and Webster, could carry the entire load on all but four days of the winter of 1959-1960, and on those days, interruption of industrial customers and reducing temperature

settings of heating customers' thermostats would make it possible to carry the entire remaining load on all days.

There are no production facilities in Spencer and no connections between the two divisions. Accordingly, the Spencer Division area is entirely dependent on pipeline gas.

In the Webster-Southbridge division, the incoming natural gas flows in two directions to the holder station at Union Street, Webster, and the holder station at Wardwell Court, Southbridge. The high pressure feeder main connecting the two holder stations is composed of 4-inch, 6-inch and 8-inch diameter pipe. The gas which flows into Southbridge is reduced in pressure at the holder station and routed to the low pressure system. There is one high pressure feeder main. The gas which flows toward Webster supplies a high pressure distribution area in Dudley and the holder station in Webster. At the Webster holder station, the gas is reduced in pressure and routed into the holder from which it flows through a station governor into the low pressure network in Webster and part of Dudley. The low pressure systems of the Webster-Southbridge division operate at 6.0 inches water column.

In the Spencer division, the incoming natural gas flows from the receiving station through an 8 inch diameter high pressure feeder main which connects to the high pressure feeder mains supplying the holder station at Spencer and the high pressure distribution systems in the communities of Brookfield, East Brookfield, North Brookfield, West Brookfield, Leicester, Spencer and Warren. At the holder station in Spencer, the gas is reduced in pressure and routed to the intermediate pressure distribution network in Spencer. All of the customers in the Spencer division are served through house service pressure regulators from high or intermediate pressure mains.

The Central Massachusetts Gas Company has 13.6 miles of cast iron mains, 34.0 miles of welded steel mains and

93.7 miles of wrought iron or steel mains with screwed or mechanical joint connections. The total of 141.3 miles of mains include 70.6 miles of principal high pressure feeder mains which range in diameter from ¾ to 8 inches. 46 per cent of the mains are 4 inch or larger in diameter.

LAWRENCE GAS COMPANY

The production facilities of the Lawrence Gas Company are located off Marston Street, Lawrence, consisting of a high Btu oil gas plant, and a low pressure L.P. Air gas plant. The oil gas plant contains one production unit, two light oil generators, one 9 feet in diameter, one 8 feet in diameter with an 8 foot diameter superheater. This machine is capable of producing 110 MCFH of 1000 Btu equivalent gas or 2200 MCF per day. Fuel storage for oil gas production consists of 180,000 gallons, equivalent to about 12,000 MCF of 1000 Btu equivalent gas. The low pressure L.P. Air gas plant is a jet plant with a maximum production capacity of 200 MCFH of equivalent 1000 Btu gas or 4800 MCF per day. Fuel storage for L.P. Air gas production consists of 75,000 gallons of propane equivalent to 6900 MCF of 1000 Btu equivalent gas.

Oil gas and L.P. Air gas, as required, are produced and stored in a low pressure storage holder. From there they are pumped to higher pressures for mixing with natural gas for sendout to the medium pressure distribution system. Mixed gas also flows into the low pressure holders through a pressure regulator for plant distribution to the local area of Lawrence. The production plants are used primarily for peak-shaving and also they provide backup for the natural gas supply. When used for peak-shaving, oil gas cannot be used for more than 40% of the sendout, and L.P. Air gas is not used for more than 50%. When both oil gas and L.P. Air gas are used, the mixture is limited to 60% of the sendout.

Tennessee Gas Transmission Company delivers gas to the Lawrence Gas Company at a take point in Methuen, Massachusetts. From this point, part of the gas is delivered westerly to a pressure regulator station at Jackson and East Streets, Methuen, supplying the low pressure distribution system. The bulk of the gas purchased flows from Oak Street to the Marston Street plant in Lawrence, the main distribution center of the Company. From the main distribution center, low pressure and feeder mains extend into Lawrence, Methuen, Andover and North Andover.

Customers are served from low pressure mains operating at 6-inch water pressure and intermediate pressure mains operating at from 20-inch water pressure to 2 psig. About 2.5% of the customers are served through individual house pressure regulators. The Lawrence distribution system consists of approximately 253.5 miles of cast iron mains, 22.5 miles of welded steel mains, and 25.7 miles of wrought iron and steel mains with threaded or mechanical joints. Included in this mileage are the principal high pressure feeder mains which total about 14.5 miles ranging from 6 inches to 12 inches in diameter. Approximately 86% of the mains in the Lawrence distribution system are 4 inches or larger in diameter.

LYNN GAS COMPANY

The production plant of the Lynn Gas Company is located on the Lynnway in Lynn, and consists of three production units; one 12′6″ and two 10′6″ inverted "U" type high Btu oil gas sets. Only two of these sets can be operated simultaneously, the larger set with one of the smaller sets, due to the fact that the two smaller sets have a common air blower. This plant can produce a maximum of 390 MCFH of 1000 Btu equivalent gas or 7800 MCF per day. Fuel storage for oil gas production consists of 4,555,000 gallons of oil storage, which is equivalent to 304,000 MCF of 1000

Btu equivalent gas. This is adequate for about 39 days of capacity production. Lynn has excess oil storage capacity which could be beneficially used by the North Shore Gas Company and/or Mystic Valley Gas Company.

High Btu oil gas as produced is put into the 2000 MCF and 5000 MCF storage holders where it is mixed with natural gas in the holders. Peak-shaving is accomplished by delivery of this mixed gas directly to the local low pressure system or by supplying this mixed gas from these storage holders through gas compressors to the high pressure feeder main system.

Lynn Gas Company has no boiler plant of its own and purchases all of its steam requirements from the adjacent plant of the Lynn Electric Company.

Lynn purchases all of its natural gas requirements from the Tennessee Gas Transmission Company through the receiving station at Homesite Street, Lynn, Massachusetts. From this station the natural gas purchased is delivered to the distribution and control center located at the gas plant on the Lynnway through a primary 12 inch high pressure feeder main. At the Lynnway distribution center the incoming natural gas is delivered through a pressure regulator to the storage holders and thence through another pressure regulator to the local low pressure distribution center. Also at this distribution center, the incoming natural gas is routed to high pressure feeder mains which extend into Lynn, Swampscott, Marblehead, Saugus, Lynnfield and Nahant.

Customers are served generally from a low pressure distribution system in which the operating pressure is 6.0 inches water. The high pressure feeder main system operating at pressures of 20 to 45 psig supplies and reinforces the pressure in the low pressure system through pressure regulators connecting the two systems at necessary locations. About 7% of the customers are supplied directly

from the high pressure feeder system through house service pressure regulators.

The Lynn distribution system consists of 245 miles of cast iron main, 81 miles of welded steel main, and 42 miles of wrought iron or steel main with threaded or mechanical joints all ranging in diameter from 1 inch to 24 inches. Included in this mileage are the principal high pressure feeder mains which total about 31¾ miles and which range in diameter from 4 inches to 12 inches. Approximately 82% of the mains in Lynn's distribution system are 4 inch or larger in diameter.

MYSTIC VALLEY GAS COMPANY

The Mystic Valley Gas Company has three gas plants: a high Btu oil gas plant and a low pressure L.P. Air gas plant at Charles Street, Malden, and a high pressure L.P. Air gas plant at John Street, Reading. The Malden oil gas plant contains three production units, two 11½ foot sets and one 11 foot set. These are all twin generator light gas oil sets. This plant can produce a maximum of 590 MCFH of 1000 Btu equivalent gas or 11,800 MCF per day. Fuel storage for oil gas production consists of 900,000 gallons of oil storage, which is equivalent to 60,000 MCF of 1000 Btu equivalent gas. The low pressure L.P. Air gas plant at Malden is a jet plant with a maximum production capacity of 420 MCFH of 1000 Btu equivalent gas or a daily capacity of 10,080 MCF. Fuel storage for L.P. Air production consists of 225,000 gallons of propane which is equivalent to 20,700 MCF of 1000 Btu equivalent gas.

Gas produced by both the oil gas plant and the L.P. Air gas plant at Malden is put into a 1000 MCF storage holder at the plant. From there it is compressed and delivered to the plant control center where it is mixed for peak-shaving purposes with high pressure natural gas from the Arlington receiving station before routing into the high pressure

distribution feeder main system and through a pressure regulator into the low pressure distribution network.

The high pressure L.P. Air gas plant at John Street, Reading, can produce a maximum of 420 MCFH of 1000 Btu equivalent gas at 50 psig or 10,080 MCF per day. Fuel storage for L.P. Air production consists of 150,000 gallons of propane which is equivalent to 13,800 MCF of 1000 Btu equivalent gas. This gas, as produced, can be mixed for peak-shaving purposes with high pressure natural gas from the Reading receiving station. The mixed gas is then delivered to the high pressure feeder main system; north to Reading and south to the main distribution system of the Mystic Valley Gas Company.

Under normal operating conditions, mixed produced gas and natural gas cannot be delivered to the Arlington area and can only be delivered to a very small part of the Revere area. Because of this situation, peak-shaving in the Mystic Valley Gas Company is limited to about 53% of its distribution area and load.

Mystic Valley purchases gas from Tennessee Gas Transmission Company at four receiving stations. These stations are located on the periphery of the distribution system at Washington Street, Arlington, at Wood Street, Lexington, at Lowell Street, Reading, and at Broadway, Malden. There are three major distribution centers or stations and two minor stations in the Mystic Valley Gas Company. The major centers are at Grove Street, Arlington, Railroad Avenue, Revere, and Charles Street, Malden. The two minor stations are at John Street, Reading, and Wood Street, Lexington. Normally gas flows from the Arlington station through a 16 inch high pressure primary feeder to a regulating and holder station at Arlington, at which point part of the gas is routed through secondary high pressure feeder mains to the communities of Arlington, Belmont, Burlington, Lexington, Winchester and Woburn. The remainder

of the gas from the Arlington station continues to flow through the 16 inch high pressure primary feeder until it reaches the Malden gas plant at which point the gas is routed through secondary high pressure feeder mains toward the communities of Medford, Malden, Everett, Revere, Melrose, Stoneham, Wakefield and Reading. At the Malden gas plant, peak-shaving is performed by adding propane-air and/or oil gas to the natural gas. During the summer months, gas flows from the Lexington station into the distribution system owned by the Air Force at Hanscom Air Base in Bedford. During the winter months the gas consumption at the air base is substantially reduced and, in order to maintain a favorable purchased gas load factor at each take point, the Mystic Valley Gas Company routes through an 8 inch high pressure primary feeder and several secondary high pressure feeders, a quantity of gas into the area normally supplied from the Arlington receiving station. The control of volume flow during the winter months from the Lexington station is accomplished by means of a remote control device which is monitored by personnel at the Malden control center.

Gas which is received at the Reading station travels through a 10 inch high pressure primary feeder to the L.P. Air gas plant and regulating station at Reading. From this point the gas is routed, through secondary high pressure feeder mains, toward the communities of Reading, Stoneham, Melrose, Wakefield, Malden and Revere. When required for peak-shaving, propane air gas is added to the natural gas at the Reading plant.

The receiving station located in Malden adjacent to the Revere boundary, delivers gas through a 12-inch primary high pressure feeder main and several secondary high pressure feeder mains. The gas flows into the communities of Revere and Winthrop partly by way of regulators con-

nected to the 12-inch primary feeder and partly by way of regulators located at the holder station at Revere.

Monitoring of gas pressure and flow conditions is performed by the telemetering of various information from selected locations. For example, the height of outlying holders in Arlington, Revere and Winchester can be determined by observation of telemetered information in the control center. The flow into the holders can be regulated by personnel at the Malden control center via remote control facilities.

The Mystic Valley Gas Company has approximately 79,300 customer services, some of which supply more than one customer through separate meters. There are approximately 5100 house service regulators in use to control the pressure delivered to appliances wherever the distribution main pressure is greater than normal low pressure. The pressure in the high pressure mains ranges from about 2 psig to about 90 psig depending on the time of year, the particular main considered and customer requirements. The high pressure mains range in diameter from ¾ inch to 20 inches. The low pressure system is supplied from holders and/or regulator stations which receive their supply from high pressure feeder mains. The low pressure system operates at an average pressure of approximately 6 inches water column. Low pressure mains range in diameter from 1 inch to 30 inches. In the Mystic Valley area there are approximately 710 miles of cast iron mains, 106 miles of welded steel mains and 100 miles of wrought iron or steel mains with the latter having other than welded joint construction.

North Shore Gas Company

The production facilities of the North Shore Gas Company are a high Btu oil gas and a low pressure L.P. Air gas plant on Pierce Avenue, Salem, a high pressure L.P.

Air gas plant in Danvers and an L.P. Air gas plant on Emerson Avenue, Gloucester.

The Pierce Avenue plant in Salem contains two high Btu oil gas machines, 11 feet and 9 feet in diameter and can produce a maximum of 283 MCFH or 5650 MCF per day of 1000 Btu equivalent gas. Oil storage for high Btu oil gas production amounts to 230,000 gallons equivalent to 15,320 MCF of 1000 Btu equivalent gas or 2.71 days at the maximum production rate. Also located at the Pierce Avenue plant in Salem is a low pressure jet mixing type L.P. Air gas plant with 50,000 gallons of propane storage. This plant can produce a maximum of 216 MCF per hour of 1000 Btu equivalent gas and on the same basis can produce 5185 MCF of 1000 Btu equivalent gas per day. The propane storage is equivalent to 4600 MCF of 1000 Btu equivalent gas.

At the Pierce Avenue plant high Btu oil gas and/or L.P. Air gas is produced and delivered directly into the 500 MCF storage holder. Compressors take the gas from this storage holder and deliver it to a high pressure mixing house where it is mixed with natural gas for high pressure distribution. The mixed gas then goes out to the high pressure system or through a pressure regulator to the 2000 MCF holder for low pressure distribution. Mixed gas from the 2000 MCF holder is also delivered to the River Street holder station, Beverly, for low pressure distribution in the Beverly area.

The high pressure L.P. Air gas plant at Danvers can produce a maximum volume of 360 MCF per hour of 1000 Btu equivalent gas at 75 psig, and on the same basis can produce 8640 MCF of gas per day. The propane storage is equivalent to 6900 MCF of 1000 Btu equivalent gas. Under normal peak-shaving operation, L.P. Air gas is produced at this plant and mixed directly with natural gas being delivered by the Tennessee Gas Transmission Com-

pany, and sent out at high pressure on the main take lines delivering gas to the Beverly side of the distribution system and directly south to Peabody and the Salem distribution center at the Salem plant at Pierce Avenue.

Under emergency operation or the failure of gas supply from the pipeline, the Pierce Avenue plant would produce L.P. Air gas and oil gas and the Danvers L.P. Air gas plant would produce L.P. Air gas at high pressure. In this way, the entire load of this Division of the North Shore Gas Company could be produced. Under normal peak-shaving operations, the high Btu oil gas plant at Pierce Avenue is used. While 40% is considered to be a critical limit of produced gas in the sendout gas in this territory, there are five industrial plants manufacturing lamp bulbs or other similar products which have a very critical tolerance to mixed gas. Since high Btu oil gas has the least effect on industrial applications, it is given preference in peak-shaving.

In the Gloucester division of the North Shore Gas Company, Tennessee Gas Transmission Company delivers gas at a receiving station at Essex Avenue. From there it is delivered by a high pressure line to the main part of Gloucester across the Annisquam River. On the west side of the River there are only a few domestic and commercial customers and one large industrial. At the Emerson Avenue distribution center is a Hortonsphere high pressure gas holder with an effective capacity of 190 MCF. Also located here is a high pressure L.P. Air gas plant with a maximum capacity of 137 MCF per hour of 1000 Btu equivalent gas, or 3288 MCF of 1000 Btu equivalent gas per day. The L.P. storage at this plant consists of 50,000 gallons of propane equivalent to 4600 MCF of 1000 Btu equivalent gas.

Under emergency operation such as complete failure of pipeline gas the Emerson Avenue L.P. Air gas plant and the Hortonsphere could supply the entire requirements of

the Gloucester division. Under normal peak-shaving operation, the loads west of the Annisquam River cannot be supplied with manufactured gas. Natural gas from the pipeline and L.P. Air gas are mixed and distributed to the low pressure system through pressure regulators and to the intermediate pressure system for local distribution in Gloucester east of the River.

The North Shore Gas Company purchases all of its natural gas requirements from the Tennessee Gas Transmission Company through two receiving stations; one in the Gloucester division at Essex Avenue, Gloucester, and one in the Salem-Beverly division at Broad Street, Danvers. These two divisions of the North Shore Gas Company have completely separate distribution systems, with no interconnecting mains between divisions.

In the Gloucester division, the incoming natural gas is transported from the receiving station to the L.P. Air gas plant at Emerson Avenue, through an 8 inch diameter primary high pressure feeder main. The incoming gas pressure is reduced at this point and routed through high pressure feeder mains which extend into the communities of Gloucester and Rockport.

Most of the customers are served from a low pressure distribution system in which the operating pressure is 6.0 inches water column. The high and intermediate pressure feeder main system operating at pressures of from 1 psig to 50 psig reinforces the pressure in the low pressure system through pressure regulators connecting the two systems at necessary locations. About 15 per cent of the customers are supplied from the intermediate and high pressure system through house service pressure regulators.

In the Salem-Beverly division, the incoming gas is transported from the receiving station and L.P. Air gas plant at Broad Street, Danvers, to the Salem gas plant at Pierce Avenue, Salem, through a 12-inch diameter primary high

pressure feeder main; and to a connection in Danvers to the high pressure peripheral feeder system through a 12-inch diameter primary high pressure feeder main. At the Pierce Avenue plant, the gas is reduced in pressure and routed to the high pressure peripheral feeder to the holders in Salem and Beverly and to the low pressure systems in Salem, Peabody and Beverly.

The high pressure peripheral feeder forms a loop which extends from the holder station located at River Street, Beverly, through parts of Beverly, Danvers, Peabody and Salem, to the gas plant at Pierce Avenue, Salem. There are high pressure feeder branches from the loop main and connections where the low pressure system is reinforced through pressure regulators. About 4 per cent of the customers in the Salem-Peabody division are served through house service regulators from high pressure distribution mains. The remainder of the customers are supplied from the low pressure systems.

The North Shore Gas Company has approximately 347 miles of mains ranging from 1¼ inches to 16 inches in diameter, consisting of 247 miles of cast iron mains, 62 miles of welded steel mains and 38 miles of wrought iron or steel mains with screwed or mechanical joint connections. Included in this total mileage are the principal high pressure feeders which are about 58 miles in total length and which range from 2 inches to 12 inches in diameter. Approximately 85 per cent of the mains in the North Shore Gas Company's distribution system are 4 inches or larger in diameter.

Northampton Gas Light Company

This company supplies gas to the City of Northampton and the Town of Easthampton. Natural gas is purchased from the Tennessee Gas Transmission Company at the Earl Street delivery point from which gas for Northampton

flows to the Crafts Avenue production plant to the West Street holder station, the distribution center for low pressure delivery. At the Crafts Avenue plant there is an oil gas plant containing one high Btu oil gas machine capable of producing 55 MCF per hour or 1100 MCF per day. Oil gas produced at the Crafts Avenue plant is mixed with natural gas and distributed by compressors to the intermediate pressure system extending north to Florence and Leeds and also is sent to the low pressure holder at West Street for low pressure distribution. Gas for Easthampton is transmitted at high pressure from the Earl Street gate station and cannot be peak shaved. Approximately 60% of the total Northampton Gas Light Company load can be peak shaved.

Northampton plans to install an L.P. Air gas plant at the Earl Street delivery point this year. Following that the oil gas plant at Crafts Avenue will be abandoned. This will make it possible to peak shave the entire Northampton system.

Gas for Easthampton flows from the Earl Street delivery point through a high pressure feeder main which is partly 8 inches and partly 4 inches in diameter to the Easthampton distribution system and to the Easthampton holder station at Liberty and Mechanic Streets. A district regulator between the feeder main and the low pressure system provides pressure reinforcement. At the holder station in Easthampton the gas is reduced in pressure and routed to the holder, the low pressure network and to an intermediate pressure feeder main which in turn supplies a district regulator for reinforcing the pressure in part of the low pressure system.

The low pressure systems in Easthampton and Northampton operate at a pressure of 6.0 inches water column. Approximately 5 per cent of the customers of the Northampton Gas Light Company are served from high or inter-

mediate pressure mains through house service pressure regulators. The Northampton Gas Light Company has 69.7 miles of cast iron mains, 16.9 miles of welded steel mains and 24.7 miles of wrought iron or steel mains with screwed or mechanical joint connections. The total of 111.3 miles of mains includes 23.4 miles of principal high pressure mains which range in diameter from 2 inches to 8 inches. 60.2 per cent of the total mains are 4 inches in diameter or larger.

Norwood Gas Company

The Norwood Gas Company purchases gas from the Algonquin Gas Transmission Company, delivering it to the Dean Street plant of Norwood. At this location Norwood has an L.P. Air gas plant with an hourly rating of 100 MCF of 1000 Btu equivalent gas at 13 psig, or 2400 MCF per day. During normal peak-shaving operations L.P. Air gas is mixed directly with the incoming natural gas and distributed through regulators to the low pressure distribution system of Norwood and directly to the intermediate pressure mains. Norwood has propane storage in the amount of 50,000 gallons equal to 4600 MCF of 1000 Btu equivalent gas.

In the event of complete failure of pipeline gas, the L.P. Air gas plant is presently capable of supplying the entire load of Norwood. During normal peak-shaving operations, a 55% mixture of L.P. Air gas with natural gas is the maximum permitted by interchangeability.

District pressure regulators connecting between the high pressure feeder mains and the low pressure network at necessary locations serve to reinforce the pressure in the low pressure system. The low pressure system operates at 6.0 inches water column. Approximately 11 per cent of the customers of the Norwood Gas Company are supplied from high pressure mains and house service pressure regu-

lators. The Norwood Gas Company has 4.2 miles of cast iron mains, 44.0 miles of welded steel mains and 23.9 miles of wrought iron or steel mains which have screwed or mechanical joint connections. The total of 72.1 miles of mains includes 13.7 miles of principal high pressure feeder mains ranging in diameter from 1½ inches to 8 inches. 69.8 per cent of the total mains are 4 inches in diameter or larger.

Wachusett Gas Company

The Wachusett Gas Company consists of two completely separated divisions, the Clinton division and the Leominster division. There is no physical connection between the distribution systems of those two divisions. The Leominster division of the company has an L.P. Air gas plant and storage holder located at Mill Street in Leominster. The L.P. Air gas plant is a high pressure plant with a production capacity of 130 MCF per hour @ 10 psig of 1000 Btu equivalent gas or 3120 MCF per day. Fuel storage for L.P. Air gas production consists of 50,000 gallons of propane storage equal to 4600 MCF of 1000 Btu equivalent gas. L.P. Air gas as produced for peak-shaving is mixed directly with the incoming natural gas and routed to the high pressure feeder system and also through a pressure regulator to the local low pressure distribution system. A 50% mix of L.P. Air gas and natural gas is considered to be the maximum usable mixture during peak-shaving on account of interchangeability problems with appliances. In the event of a complete failure of natural gas supply the capacity of the L.P. Air gas plant is sufficient to carry the entire Leominster division load of Wachusett Gas Company.

The Clinton division of Wachusett Gas Company has no production facilities of any kind. There is at the Pleasant Street holder station a 150 MCF wet seal holder capable of supplying pressure to the low pressure portion of the town

of Clinton, and tthis with a readily established emergency tie with Worcestter provides backup to this division.

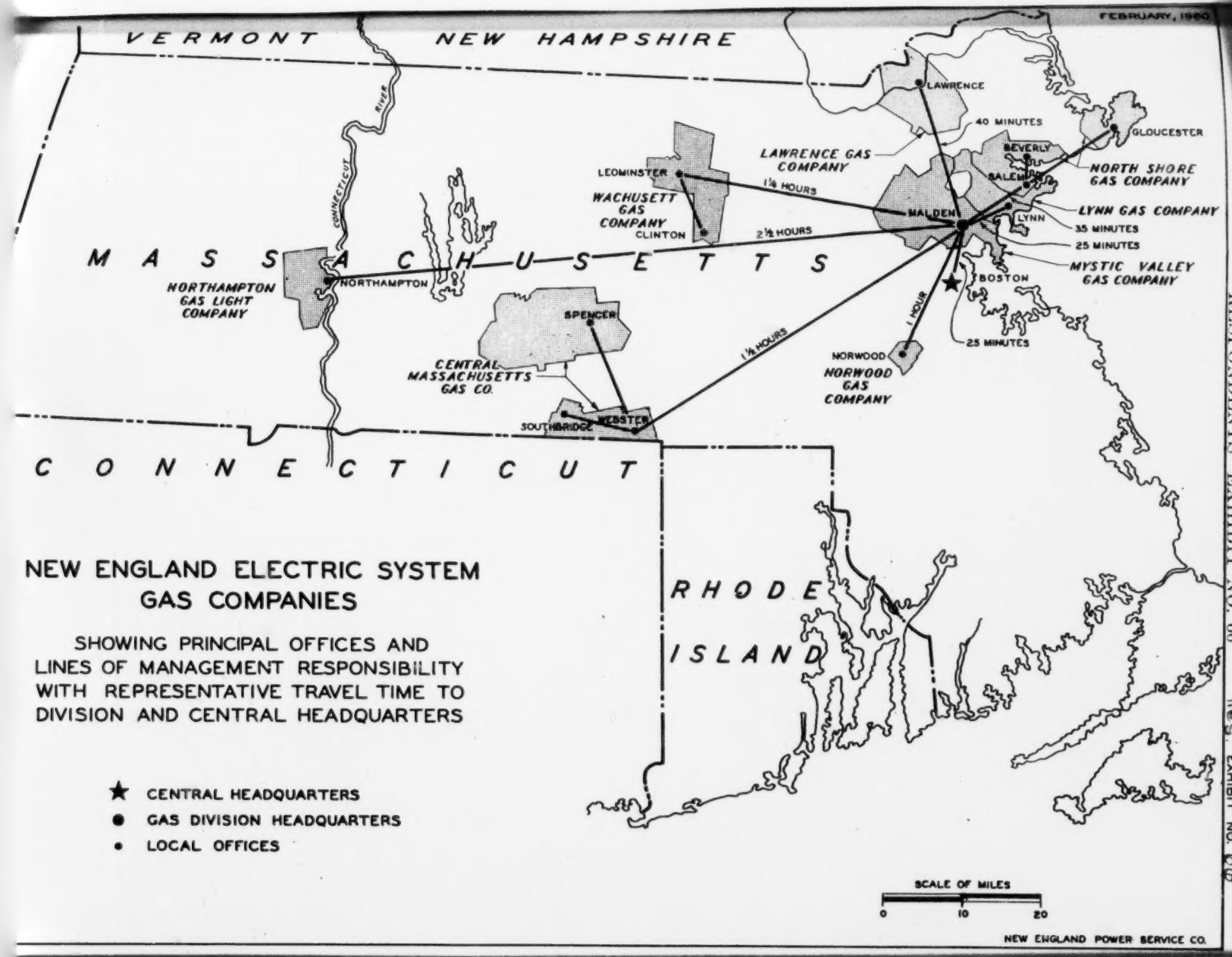
The Wachusettt Gas Company purchases all of its natural gas requirementss from Tennessee Gas Transmission Company through twco receiving stations; one located at Bishop Street, Leominstcer, and the other located at Barrett Street, Clinton.

In the Leomimster division, the incoming natural gas flows through a 66-inch primary high pressure feeder which leads from the reeceiving station to the L.P. Aid gas plant at Mill Street, Leominster. At the gas plant location, the gas is reduced in pressure and routed to the storage holder, the low pressure distribution system and to the high and intermediate preessure feeder mains which extend into Leominster and ppart of Lunenburg. Approximately 10 per cent of the customers in the Leominster division are supplied through house service pressure regulators from high or intermediate pressure mains. The remainder of the customers are supplied from low pressure mains in which the pressure is reinforced by district regulators connected between the high or intermediate pressure feeder mains and the low pressure mains at necessary locations. The low pressure system operates at a pressure of 6.0 inches water column.

In the Clinton division, the incoming natural gas flows through a 6-inch primary high pressure feeder main which leads from the reeceiving station to the holder and regulator station at Pleasaint Street, Clinton. At the Pleasant Street location the gas is reduced in pressure and routed to the 150 MCF storage holder, the low pressure distribution network and to a hiigh pressure feeder main which extends into Clinton to ssupply a district regulator station. The district regulatorr station reinforces the low pressure network supplying Clinton and a very small area of Lancaster.

Less than 1 per cent of the customers in Clinton are served from high pressure mains through house service pressure regulators. Nearly all of the customers receive gas from the low pressure system which operates at a pressure of 6.0 inches water column.

The Wachusett Gas Company has approximately 76.7 miles of cast iron mains, 8.7 miles of welded steel mains and 11.5 miles of wrought iron or steel mains with screwed or mechanical joint connections for a total of 96.9 miles of mains. This latter figure includes 10.1 miles of principal high pressure feeder mains ranging in diameter from 4 inches to 10 inches. Mains which are 4 inches in diameter or larger represent 86.1 per cent of the total length of the distribution system.



RESPONDENTS' EXHIBIT NO. 66 Res. EXHIBIT NO. 66

CITY GATE COST OF NATURAL GAS FOR SPACE HEATING VS RETAIL COST OF #2 OIL

lumn 1	2	3	4	5	6	7	8
		Natural Gas			#2 Oil		
ity	Nat. Gas Supplier	City Gate Rate (1) Demand	Commodity	Cost/MCF 27% L.F.(2)	¢/gal. Jan.1960(3)	Cost per MM Btu	Difference Col.7-Col.5
imore	Atlantic Seaboard	$2.95	31.47¢	67.39¢	15.04	107.43¢	40.04¢
on	Algonquin	6.34	33.5	110.70	15.28	109.14	(1.56)
go	Nat.Gas Pipeline	2.66	20.0	52.39	15.11	107.93	55.54
it	Amer.Louisiana	3.61	27.0	70.96	16.07 (4)	114.79	43.83
s City	Cities Service	1.15	18.5	32.50	15.84	113.14	80.64
, Mass.	Tennessee	5.05	36.1	97.59	15.28	109.14	11.55
olis	Northern Natural	4.17	22.9	73.68	15.43	110.21	36.53
k	Transco.	3.72	26.0	71.30	15.23	108.79	37.49
lphia	Manufacturers	2.90	35.35	70.66	14.98	107.00	36.34
(Ore.)	Pacific Northwest	3.53	21.0	63.98	15.30	109.29	45.31
	Miss.River Fuel	2.00	20.0	44.35	15.71	112.21	67.86
—	Pacific Northwest	3.53	21.0	63.98	17.89	127.79	63.81
Balt D.C.	Atlantic Seaboard	2.95	31.47	67.39	15.14	108.14	40.75

Bo

(1) Effective Rates January 1, 1960

(2) Approximate Load Factor of Space Heating Gas

(3) B.L.S. Retail Prices and Indices of Fuels and Electricity

(4) January, 1959 B.L.S. does not report figure for January, 1960

Rec. Exhibit No. 68

TENNESSEE GAS TRANSMISSION COMPANY

Zone Rates Effective April 5, 1960

	CD and G Rates				GS
	Demand	Commodity	100% LF	65% LF	
ZONE 1 Tenn., Ala., Miss.	$2.85	22.6¢	32.0¢	37.0¢	38.6¢
ZONE 2 Kentucky	3.55	25.5	37.2	43.5	46.1
ZONE 3 W. Va.	3.95	26.9	39.9	46.9	50.2
ZONE 4 Ohio, Pa.	4.50	29.1	43.9	51.9	56.0
ZONE 5 N.Y., N.J.	5.20	32.6	49.7	58.9	64.1
ZONE 6 N.E.	6.15	36.1	56.3	67.2	73.8

Note: Volumes measured at 15.025 pounds per square inch absolute

GAS HOUSEHEATING CUSTOMERS AND HEATING SATURATIONS, BY CENSUS DIVISION
1952 - 1961 YEARLY AVERAGES (1) (2)

ensus Division	1952		1953		1954		1955		1956	
	Customers	Percent	Customers	Percent	Customers	Percent	Customers	Percent	Customers	Perce
nited States	11,054	46.9	12,297	49.9	13,402	52.8	14,711	56.0	16,080	57.9
New England	93	6.1	108	6.9	123	8.0	146	9.6	197	13.0
Middle Atlantic	981	15.4	1,227	18.9	1,409	21.4	1,665	25.0	1,864	27.4
East North Central	1,889	35.2	2,118	38.0	2,348	41.0	2,694	45.6	3,026	48.6
West North Central	1,053	58.5	1,200	62.4	1,343	67.2	1,454	69.7	1,567	70.9
South Atlantic	678	42.8	798	46.8	905	50.9	1,042	56.4	1,156	57.4
East South Central	570	70.7	656	75.6	715	75.5	782	76.7	883	77.1
West South Central	2,430	99.4	2,570	99.2	2,714	99.8	2,849	99.2	3,016	97.3
Mountain	565	89.4	646	92.4	705	93.5	757	91.8	815	87.4
Pacific	2,795	92.2	2,974	92.2	3,140	93.2	3,322	93.7	3,556	93.2

ensus Division	1957		1958		1959 (3)		1960 (3)		1961 (3)	
	Customers	Percent	Customers	Percent	Customers	Percent	Customers	Percent	Customers	Perc
nited States	17,188	61.2	18,265	63.4	19,547	66.1	20,856	68.7	22,170	71.1
New England	245	16.2	290	19.1	333	21.9	377	24.8	423	27.8
Middle Atlantic	1,971	28.8	2,189	31.6	2,420	34.5	2,597	36.6	2,772	38.6
East North Central	3,314	52.7	3,619	56.1	3,967	60.0	4,367	64.4	4,747	68.3
West North Central	1,656	74.1	1,742	76.2	1,864	79.3	1,976	81.8	2,092	84.3
South Atlantic	1,226	59.9	1,301	61.6	1,403	64.3	1,538	67.7	1,691	71.4
East South Central	976	83.4	1,040	85.0	1,116	86.6	1,168	86.3	1,220	85.8
West South Central	3,143	99.8	3,233	99.5	3,342	99.6	3,447	99.7	3,546	99.8
Mountain	900	94.9	953	94.6	1,022	96.0	1,099	97.8	1,180	99.4
Pacific	3,757	96.6	3,898	97.0	4,080	97.5	4,287	98.6	4,499	99.4

Notes: (1) Customers reported in thousands
(2) Percentages refer to proportion of total residential customers, within specified areas, using gas for heating.
(3) Years 1952-1958 Actual - Years 1959-1960-1961 Estimated

Personnel Statistics - 1959 Forms - As of January 1, 1959
Summary of Total Employees by Departments

Personnel Analysis - Pro Forma - As of January 1, 1959

Summary of Total Employees by Departments

tual-Jan. 1, 1959	Mystic		Lawrence		North Shore		Lynn		Central Mass.		Northampton		Wachusett		Norwood	
	1-1-59	PF	1-1-59	PF	1-1-59	PF	1-1-59	PF	1-1-59	PF	1-1-59	PF	1-1-59	PF	1-1-59	PF
ec.-Adm. and Staff																
Part Time	18	-	20	-	21	-	22	-	15	-	21	-	15	-	19	-
Full Time	14	31	4	15	6	16	-	16	3	9	5	10	2	9	3	6
Total	32	31	24	15	27	16	22	16	18	9	26	10	17	9	22	6
oduction																
Part Time	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-
Full Time	35	35	16	16	20	20	11	23	1	1	4	4	1	1	1	1
Total	35	35	16	16	20	20	31	23	1	1	4	4	1	1	1	1
stribution																
Part Time	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
Full Time	55	55	14	14	17	17	24	34	10	10	5	5	5	5	3	3
Total	55	55	14	14	17	17	27	34	10	10	5	5	5	5	3	3
rvice and Garage																
Part Time	-	-	-	-	-	-	41	-	-	-	-	-	-	-	-	-
Full Time	-	5	3	3	2	2	-	4	-	-	-	-	-	-	-	-
Total	-	5	3	3	2	2	41	4	-	-	-	-	-	-	-	-
ilization																
Part Time	2	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-
Full Time	88	90	25	26	26	26	25	49	9	10	8	9	8	8	4	4
Total	90	90	25	26	26	26	55	49	9	10	8	9	8	8	4	4
Business																
Part Time	9	-	-	-	-	-	29	-	-	-	-	-	-	-	-	-
Full Time	55	60	21	21	19	19	-	24	7	7	4	4	5	5	2	2
Total	64	60	21	21	19	19	29	24	7	7	4	4	5	5	2	2
neral and Cust.Accounting																
Part Time	4	-	2	-	-	-	129	-	-	-	-	-	-	-	-	-
Full Time	122	156	40	54	42	57	2	95	13	24	11	19	6	21	7	9
Total	126	156	42	54	42	57	131	95	13	24	11	19	6	21	7	9
nd Total																
Part Time	33	-	22	-	21	-	274	-	15	-	21	-	15	-	19	-
Full Time	369	432	123	149	132	157	62	245	43	61	37	51	27	49	20	25
Total	402	432	145	149	153	157	336	245	58	61	58	51	42	49	39	25

SUMMARY - EBASCO REPORT - GAS COMPANIES
Personnel Analysis - Pro Forma - as of January 1, 1959
Executive, Administrative and Staff, etc.

	Mystic		Lawrence		North Shore		Lynn		Central Mass.		Northampton		Wachusett		Norwood	
President	1	$ 33,000	1	$ 21,000	1	$ 21,000	1	$ 22,000	1	$14,000	1	$14,000	1	$14,000	1	$14,000
V.P.-Operations	1	22,000	1	16,000	1	16,000	1	16,000								
Director - Eng.	1	15,000														
Engineer	1	12,000	1	11,000	1	11,000	1	10,000	1	10,000	1	10,000	1	10,000		
Dist. Engineer	1	7,000														
Asst. Engineer	2	18,000	1	9,000	1	9,000	1	7,840								
Jr. Engineer	1	7,000	1	7,000	1	7,000	1	5,886								
Director Personnel	1	11,000														
Personnel Asst.	1	8,000														
Purchasing Agent	1	10,000														
Gen. Supt. *	1	12,000	1	8,680	1	9,000	1	11,000	1	10,000	1	10,000	1	10,000	1	10,000
Local Manager (Gloucester)					1	8,340										
V.P.-Sales-Mkg.	1	20,000														
Exec. Asst.	1	11,000	1	8,000												
Sales Manager			1	15,000	1	15,000	1	15,000	1	6,000	1	6,000	1	6,000		
Admin. Asst.					1	8,000	1	8,000								
Treasurer	1	20,000	1	16,000	1	16,000	1	16,000	1	10,000	1	10,000	1	10,000	1	10,000
Auditor	1	11,000														
Accountant	1	7,000														
Asst.Treas.&Clerk	1	14,000	1	10,000	1	10,000	1	10,000	1	7,000	1	7,000	1	7,000	1	6,000
Chief Acct.	1	9,000														
Clerk - Male											1	4,134				
Sec. & Steno.	12	52,500	5	22,600	5	22,600	6	27,890	3	12,300	3	12,800	3	12,300	2	8,300
Total	31	$299,500	15	$144,280	16	$152,940	16	$149,616	9	$69,300	10	$73,934	9	$69,300	6	$48,300
*Also Vice President - 4 small companies.																
No. Customers		98,836		32,801		33,113		40,922		9,595		8,023		8,048		4,490
Area Served (Sq.Miles)		102.0		86.8		85.4		41.0		200.0		47.9		88.0		10.0
Population Served		437,133		127,605		146,231		156,159		61,266		37,969		46,258		21,052
Miles Main		887.0		295.0		335.68		363.2		137.73		108.82		94.5		67.74
No. Employees																
Full time		369		123		132		274		43		37		27		20
Part time		33		22		21		62		15		21		15		19
Total		402		145		153		336		58		58		42		39
No. Employees-Pro Forma		432		149		157		245		61		51		49		25

RESPONDENTS' EXHIBIT NO. 71

RESPONDENTS' EXHIBIT NO. 73
NEW ENGLAND POWER SERVICE COMPANY

Summary of Services Billed — Excluding Massachusetts Gas Companies
Year Ended December 31, 1958

Servicing Division	
Plant Accounting and Reclassification	$ 40,664.70
Audit Reports Methods Assistance	164,801.33
Corporate Services	155,013.55
Employee Relations Assistance	104,629.21
Insurance and Medical Assistance	134,075.02
Labor Relations Assistance	40,417.88
Sales Department Assistance	299,360.56
Publication Services	88,507.68
Purchasing and Stores Service	264,218.87
Rate Services	55,668.81
Safety Assistance	67,760.06
Tax Services	94,931.57
Treasury Services	188,572.44
Subtotal Services	$1,698,621.68
Specific Requests	327,647.50
Total Services and Specifics	$2,026,269.18
Engineering	
General Engineering Services	$ 526,864.54
Specific Requests—Engineering Services	1,005,839.95
Total Servicing and Specifics	$1,532,704.49
Construction Performed	$5,120,290.86
Grand Total—Services Billed	$8,679,264.53

NEW ENGLAND ELECTRIC SYSTEM MASSACHUSETTS GAS SUBSIDIARIES CONSOLIDATED

BALANCE SHEETS

AS AT DECEMBER 31, 1958

	Central Mass. Gas Company	Lawrence Gas Company	Lynn Gas Company *	Mystic Valley Gas Company	Northampton Gas Light Company	North Shore Gas Company	Norwood Gas Company	Nashuasett Gas Company	Eliminations	Gas Subsidiaries Consolidated
ASSETS										
Property, plant and equipment	$2,530,562	$6,132,749	$8,872,166	$23,271,068	$2,099,367	$ 9,798,330	$1,141,095	$1,876,786		$55,722,123
Construction work in progress	11,408	23,195	1,713	321,875	13,250	9,232	195,159	19,203		595,035
Total	2,541,970	6,155,944	8,873,879	23,592,943	2,112,617	9,807,562	1,336,254	1,895,989		56,317,158
Less reserves for depreciation	335,554	1,139,871	2,781,568	4,488,024	543,110	1,618,353	227,901	337,253		11,471,634
Net property, plant and equipment	2,206,416	5,016,073	6,092,311	19,104,919	1,569,507	8,189,209	1,108,353	1,558,736		44,845,524
Miscellaneous investments				4,000		1,500				5,500
Cash	137,499	75,318	93,740	771,340	76,761	331,272	77,717	115,156		1,678,823
Accounts receivable - less reserves	227,313	641,612	316,232	2,428,186	140,809	773,490	110,272	215,361	$12,475	5,040,800
Inventories	69,218	124,212	148,685	522,822	37,848	211,198	38,925	43,013		1,195,921
Restricted deposits		8,607				300				8,907
Unamortized costs for conversion to natural gas, being amortized against income	63,180	281,190	235,503	872,580	61,884	306,650	58,580	65,780		1,945,347
Installation costs of rented water heaters	48,698	126,106	88,133	433,873	33,002	162,138	20,865	59,512		972,327
Unamortized expenses (less premium) on long-term debt		23,072	10,984	7,673		34,130				75,859
Prepaid expenses and other deferred charges	1,456	4,248	30,130	23,026	1,498	4,841	761	1,135		67,095
Total Assets	$2,753,780	$6,500,438	$7,015,718	$24,168,419	$1,921,329	$10,014,728	$1,415,473	$2,058,693	$12,475	$55,836,103
LIABILITIES										
First mortgage 6% bonds due 1977										
First mortgage 4% bonds due 1975		$2,000,000		$ 3,500,000						$ 5,500,000
First mortgage 3-5/8% bonds due 1974				5,500,000		$ 2,500,000				2,500,000
First mortgage 3-1/2% bonds due 1970						1,000,000				5,500,000
3-1/8% Note, due 1971			$1,508,000							1,000,000
7-1/2-Year Note, 3-7/8%			144,000							1,508,000
Conversion notes payable due 1960-1962	$60,000	250,500		639,000	$58,500	237,000		$51,000		144,000
Current maturities of long-term debt	20,000	83,500	120,000	213,000	19,500	79,000		17,000		1,296,000
Notes payable to NEES					650,000		$619,500			552,000
Notes payable to banks, due within one year	1,000,000	300,000	330,000	600,000		950,000		650,000		1,469,500
Accounts payable	76,515	256,542	164,682	696,393	56,079	210,921	37,870	72,653	$12,475	3,830,000
Accrued liabilities (taxes, interest, etc.)	8,971	283,552	190,478	1,259,732	88,865	336,649	61,513	98,039		1,559,180
Consumers' deposits	4,740	8,933	16,759	86,053	4,563	16,212	17,981	8,435		2,327,779
Contributions and advances for extensions	192		18,888	7,211	1,060	8,764				163,676
Sundry reserves and other deferred credits	5,160	5,433		47,587	6,536	28,009		7,999		36,115
Capital Stock and Surplus										100,724
Capital Stock	1,007,475	1,880,000	1,228,500	9,484,625	469,450	2,387,700	421,500	1,029,000		17,908,250
Premium on capital stock	226,423	568,803	1,644,919	879,073	398,281	1,668,512	74	63,319		5,649,404
Surplus invested in plant	293,998	642,671	1,157,463	193,253	57,279	154,401		25,336		2,524,401
Earned surplus	50,306	220,504	292,029	1,062,512	111,216	437,560	57,035	35,912		2,267,074
Total Capital Stock and Surplus	1,578,202	3,311,978	4,322,911	11,619,463	1,036,226	4,648,173	478,609	1,153,567		28,349,129
Total Liabilities	$2,753,780	$6,500,438	$7,015,718	$24,168,419	$1,921,329	$10,014,728	$1,415,473	$2,058,693	$12,475	$55,836,103
Minority interest in capital stock and surplus		$ 317,063	$ 282,139	$ 67,989		$ 115,132	$ 2,952			$ 785,275
NEES majority interest in capital stock and surplus	$1,578,202	2,994,915	4,040,772	11,551,474	$1,036,226	4,533,041	475,657	1,153,567		27,563,854

* Pro forma showing gas properties and related net assets of Lynn Gas and Electric Company as at December 31, 1958. On February 5, 1960, effective as of January 1, 1960, Lynn Gas and Electric Company transferred its gas properties and related net assets to Lynn Gas Company.

NEW ENGLAND ELECTRIC SYSTEM MASSACHUSETTS GAS SUBSIDIARIES CONSOLIDATED
INCOME STATEMENTS
FOR THE YEAR ENDED DECEMBER 31, 1958

	Central Mass. Gas Company	Lawrence Gas Company	Lynn Gas Company*	Mystic Valley Gas Company	Northampton Gas Light Company	North Shore Gas Company	Norwood Gas Company	Wachusett Gas Company	Eliminations	Gas Subsidiaries Consolidated
Gross Earnings										
Gas Sales	$1,021,105	$3,075,131	$3,855,457	$9,361,133	$821,139	$3,237,876	$505,530	$788,804		$22,666,175
Other Operating Revenue	1,414	1,970	17,333	9,637	27,243	29,493	153	616	$1,764	86,095
Total Operating Revenues	1,022,519	3,077,101	3,872,790	9,370,770	848,382	3,267,369	505,683	789,420	1,764	22,752,270
Merchandise and Jobbing	4,179	32,974	15,007	29,503	7,813	(14,376)	3,403	3,864		81,887
Other Income	2,133	8,553	20,984	40,957	3,369	10,924	2,145	2,853		91,918
Total Gross Earnings	1,028,831	3,118,628	3,908,781	9,441,230	859,564	3,263,417	511,231	796,137	1,764	22,926,055
Operating Expenses and Taxes										
Operating Costs	271,437	844,037	964,216	2,294,253	245,818	921,104	134,702	219,916		5,895,483
Purchased Gas	380,533	992,767	1,111,264	2,644,907	261,215	907,675	175,768	230,937		6,705,066
Maintenance ex. Amortization of Conversion Costs	67,369	206,492	272,897	832,785	54,360	142,749	26,055	48,524	1,764	1,649,467
Amortization of Cost of Converting Consumers' Appliances	21,060	86,520	119,888	256,320	20,628	90,840	12,120	17,940		625,316
Depreciation	52,000	150,000	171,357	450,000	40,000	212,000	27,000	38,000		1,140,357
Total Operating Expenses	792,399	2,279,816	2,639,622	6,478,265	622,021	2,274,368	375,645	555,317	1,764	16,015,689
Taxes - Municipal and State	51,552	224,637	488,665	918,586	64,337	279,852	22,611	51,403		2,101,643
Taxes - Federal (other than Income)	3,883	12,179	16,559	36,170	3,922	12,952	1,806	2,388		89,859
Taxes - Federal Income		225,315	264,197	698,818	63,854	234,684	39,730	73,769		1,600,367
Total Taxes	55,435	462,131	769,421	1,653,574	132,113	527,488	64,147	127,560		3,791,869
Total Operating Expenses and Taxes	847,834	2,741,947	3,409,043	8,131,839	754,134	2,801,856	439,792	682,877	1,764	19,807,558
Gross Income (Balance before Interest)	180,997	376,681	499,738	1,309,391	105,430	461,561	71,439	113,260		3,118,497
Income Deductions										
Interest on Long-term debt		120,000	90,238	409,375		135,000				754,613
Interest on Conversion Notes Payable	3,548	14,813	11,946	37,785	3,462	14,014		3,016		88,584
Amortization of Debt Discount and Expense		1,091	2,022	162		2,203				5,478
Interest on Short-term Notes Payable	34,205	2,711	30,398	3,000	22,931	32,811	26,130	23,024		175,210
Other Interest Expense	119	1,610	5,295	16,295	777	2,802	1,131	665		28,694
Interest during Construction - Credit		(715)	(136)	(4,273)	(951)		(1,504)			(7,579)
Other Charges against Income		(4,372)				9,600	(1,295)			3,933
Total Income Deductions	37,872	135,138	139,763	462,344	26,219	196,430	24,462	26,705		1,048,933
Net Income before Dividends	$ 143,125	$ 241,543	$359,975	$ 847,047	$ 79,211	$ 265,131	$ 46,977	$ 86,555		$2,069,564
Minority Interest in Net Income		$23,124	$22,455	$4,956		$6,617	$290			$ 57,442
Net Income Applicable to NEES	$ 143,125	218,419	337,520	842,091	$ 79,211	258,514	46,687	$ 86,555		2,012,122

() Indicates red figure

* Reflecting the operations of the gas properties of Lynn Gas and Electric Company which were acquired by Lynn Gas Company as of January 1, 1960.

NEW ENGLAND ELECTRIC SYSTEM MASSACHUSETTS GAS SUBSIDIARIES CONSOLIDATED
INCOME STATEMENTS
FOR THE YEAR ENDED DECEMBER 31, 1959

	Central Mass. Gas Company	Lawrence Gas Company	Lynn Gas Company*	Mystic Valley Gas Company	Northampton Gas Light Company	North Shore Gas Company	Norwood Gas Company	Wachusett Gas Company	Eliminations	Gas Subsidiaries Consolidated
Gross Earnings										
Gas Sales	$1,172,171	$3,540,911	$4,002,683	$10,398,671	$921,910	$3,632,261	$585,053	$857,526		$25,111,186
Other Operating Revenue	1,486	1,425	25,653	9,587	27,469	26,303	136	530	$1,323	91,266
Total Operating Revenues	1,173,657	3,542,336	4,028,336	10,408,258	949,379	3,658,564	585,189	858,056	1,323	25,202,452
Merchandise and Jobbing	3,920	32,370	194	(15,794)	2,431	(7,092)	(3,559)	6,163		18,633
Other Income	2,644	9,190	20,807	48,560	3,241	14,617	3,026	3,577		105,662
Total Gross Earnings	1,180,221	3,583,896	4,049,337	10,441,024	955,051	3,666,089	584,656	867,796	1,323	25,326,747
Operating Expenses and Taxes										
Operating Costs	284,085	929,258	1,078,300	2,500,064	266,750	1,036,355	168,112	230,577		6,493,501
Purchased Gas	451,586	1,224,143	1,215,538	3,105,631	293,371	1,040,842	157,746	263,268		7,752,125
Maintenance ex. Amortization of Conversion Costs	95,428	243,526	336,873	1,004,373	62,185	199,478	29,198	56,116	1,323	2,025,854
Amortization of Cost of Converting Consumers' Appliances	21,060	86,520	119,888	256,320	20,628	90,840	12,120	17,940		625,316
Depreciation	60,000	160,000	180,196	490,000	43,000	220,000	30,000	42,000		1,225,196
Total Operating Expenses	912,159	2,643,447	2,930,795	7,356,388	685,934	2,587,515	397,176	609,901	1,323	18,121,992
Taxes - Municipal and State	55,507	244,744	521,772	943,198	64,665	282,039	30,700	56,568		2,199,193
Taxes - Federal (Other than Income)	5,463	15,166	21,005	45,178	4,887	16,028	2,365	3,065		113,157
Taxes - Federal Income	72,100	245,440	241,625	424,986	76,969	262,454	51,315	76,665		1,451,554
Total Taxes	133,070	505,350	784,402	1,413,362	146,521	560,521	84,380	136,298		3,763,904
Total Operating Expenses and Taxes	1,045,229	3,148,797	3,715,197	8,769,750	832,455	3,148,036	481,556	746,199	1,323	21,885,896
Gross Income (Balance before Interest)	134,992	435,099	334,140	1,671,274	122,596	518,053	103,100	121,597		3,440,851
Income Deductions										
Interest on Long-term debt		120,000	47,116	409,375		135,000				711,491
Interest on Conversion Notes Payable	2,787	11,638	6,161	29,687	2,724	11,011		2,369		66,377
Amortization of debt discount and expense		1,225	1,327	305		2,203				5,060
Interest on Short-term Notes Payable	42,354	15,971	14,447	40,099	27,094	42,697	35,665	30,519		248,816
Other Interest Expense	595	3,552	867	20,553	2,594	12,991	2,741	3,122		47,015
Interest during Construction - Credit		(710)	(11)	(5,464)		(609)				(6,794)
Other Charges against Income				94						94
Total Income Deductions	45,736	151,676	69,907	494,649	32,412	203,293	38,406	36,010		1,072,089
Net Income before Dividends	$ 89,256	$ 283,423	$ 264,233	$1,176,625	$90,184	$ 314,760	$ 64,694	$ 85,587		$2,368,762
Minority Interest in Net Income		$ 27,133	$ 16,483	$ 6,885		$ 7,796	$ 399			$ 58,696
Net Income Applicable to NEES	$ 89,256	256,290	247,750	1,169,740	$90,184	306,964	64,295	$ 85,587		2,310,066

() Indicates red figure

* Reflecting the operations of the gas properties of Lynn Gas and Electric Company which were acquired by Lynn Gas Company as of January 1, 1960.

NEW ENGLAND ELECTRIC SYSTEM MASSACHUSETTS GAS SUBSIDIARIES CONSOLIDATED
BALANCE SHEETS
AS AT JANUARY 1, 1960

	Central Mass. Gas Company	Lawrence Gas Company	Lynn Gas Company	Mystic Valley Gas Company	Northampton Gas Light Company	North Shore Gas Company	Norwood Gas Company	Wachusett Gas Company	Eliminations	Gas Subsidiaries Consolidated
ASSETS										
Property, plant and equipment	$2,773,117	$6,613,638	$9,092,954	$25,096,250	$2,259,905	$10,291,712	$1,439,484	$2,064,967		$59,632,027
Construction work in progress	8,522	48,171	28,777	337,768	5,175	45,709	21,705	15,396		511,223
Total	2,781,639	6,661,809	9,121,731	25,434,018	2,265,080	10,337,421	1,461,189	2,080,363		60,143,250
Less reserves for depreciation	390,105	1,269,940	3,011,538	4,890,837	590,060	1,848,721	259,500	384,247		12,644,948
Net property, plant andequipment	2,391,534	5,391,869	6,110,193	20,543,181	1,675,020	8,488,700	1,201,689	1,696,116		47,498,302
Miscellaneous investments				4,000		1,500				5,500
Cash	133,865	161,412	128,200	428,665	100,321	233,616	87,530	132,681		1,406,290
Accounts receivable - less reserves	221,204	799,654	475,765	2,609,629	137,028	756,336	110,214	202,867	$8,686	5,304,011
Inventories	80,878	155,404	131,303	574,072	37,500	227,583	41,852	63,978		1,312,570
Restricted deposits		8,607		8,001		300				16,908
Unamortised costs for conversion to natural gas, being amortized against income	42,120	194,670	115,615	616,260	41,256	215,810	46,460	47,860		1,320,031
Installation costs of rented water heaters	55,867	151,116	105,351	489,531	39,507	189,013	22,398	64,955		1,117,738
Unamortised expenses (less premium) on long-term debt		21,847	9,366	7,368		31,927				70,508
Prepaid expenses and other deferred charges	441	379	21,417	9,051	797	1,887	251	241		34,464
Total Assets	$2,925,909	$6,884,958	$7,097,210	$25,289,758	$2,031,429	$10,146,672	$1,510,394	$2,208,678	$8,686	$58,086,322
LIABILITIES										
First mortgage 6% bonds due 1977										$ 5,500,000
First mortgage 4% bonds due 1975		$2,000,000		$ 3,500,000						2,500,000
First mortgage 3-5/8% bonds due 1974				5,500,000		$ 2,500,000				5,500,000
First mortgage 3-1/2% bonds due 1970						1,000,000				1,000,000
3-1/8% Note, due 1971			$1,489,000							1,489,000
7-1/2-Year Note, 3-7/8%			24,000							24,000
Conversion notes payable due 1960-1962	$ 40,000	167,000		426,000	$ 39,000	158,000		$ 34,000		864,000
Current maturities of long-term debt	20,000	83,500	60,000	213,000	19,500	79,000		17,000		492,000
Notes payable to NEES					475,000		$ 915,000			1,390,000
Notes payable to banks, due within one year	750,000	600,000	530,000	2,350,000		1,100,000		850,000		6,180,000
Accounts payable	70,944	393,517	178,522	781,198	52,093	299,789	30,381	48,262	$8,686	1,846,020
Accrued liabilities (taxes, interest, etc.)	81,910	284,068	198,418	741,824	87,354	292,839	58,295	86,057		1,830,765
Consumers' deposits	7,168	10,383	22,214	90,185	5,456	18,591	17,366	9,703		181,066
Contributions and advances for extensions	192		19,359	7,211	1,260	8,764				36,786
Sundry reserves and other deferred credits	8,760	14,289		22,407	10,136	37,157		10,939		103,688
Capital Stock and Surplus										
Capital Stock	1,357,475	1,880,000	1,228,500	9,484,625	605,825	2,387,700	421,500	1,029,000		18,394,625
Premium on capital stock	226,423	568,803	1,844,919	879,073	561,931	1,668,512	74	63,319		5,813,054
Surplus invested in plant	293,998	642,671	1,154,313	193,253	57,279	154,401		25,336		2,521,251
Earned surplus	69,039	240,727	347,965	1,100,982	116,595	441,919	67,778	35,062		2,420,067
Total Capital Stock and Surplus	1,946,935	3,332,201	4,575,697	11,657,933	1,341,630	4,652,532	489,352	1,152,717		29,148,997
Total Liabilities	$2,925,909	$6,884,958	$7,097,210	$25,289,758	$2,031,429	$10,146,672	$1,510,394	$2,208,678	$8,686	$58,086,322
Minority interest in capital stock and surplus		$ 318,999	$ 285,432	$ 68,214		$ 115,240	$ 3,019			$ 790,904
NEES majority interest in capital stock and surplus	$1,946,935	3,013,202	4,290,265	11,589,719	$1,341,630	4,537,292	486,333	$1,152,717		28,358,093

NEW ENGLAND ELECTRIC SYSTEM
Re Investment in Gas Companies
As at January 1, 1960

	Investment per NEES Books			Underlying Book Value of Investment	Return on Investment see "A" below	Interest and Common Dividends Received by NEES Year 1959	Excess of Underlying Book Value at Acquisition Date over Book Amount of Investment
	Stock	Notes	Total				
Central Mass. Gas Co.	$ 1,625,000.00		$ 1,625,000.00	$ 1,946,934.91	$ 89,255.72	$ 70,523.25	$ 150,340.21
Lawrence Gas Co.	2,795,519.71		2,795,519.71	3,013,201.92	256,290.17	238,002.80	-
Lynn Gas Co.	3,971,649.99	$1,489,000.00	5,460,649.99	5,776,080.14	294,279.54	195,294.87	193,258.96
Mystic Valley Gas Co.	8,668,763.47		8,668,763.47	11,589,719.29	1,169,739.60	1,131,495.00	2,389,896.63
Northampton Gas Light Co.	880,025.00	475,000.00	1,355,025.00	1,816,630.05	113,934.43	111,898.91	431,215.59
North Shore Gas Co.	3,009,530.12		3,009,530.12	4,537,291.31	306,963.83	302,712.80	1,353,129.31
Norwood Gas Co.	262,420.00	915,000.00	1,177,420.00	1,401,332.98	110,045.16	89,284.04	189,065.09
Wachusett Gas Co.	722,155.16		722,155.16	1,152,716.56	85,586.05	86,436.00	403,022.01
Totals	$21,935,063.45	$2,879,000.00	$24,814,063.45	$31,233,907.16	$2,426,094.50	$2,225,647.67	$5,109,927.80

"A" - Interest for Full Year on Notes owned by NEES, as shown above, at rates in effect at 3/25/60 and 1959 Common Stock Return to NEES (Net Income plus prior year surplus adjustments as included in NEES consolidated net income for 1959).

4/25/60

RESPONDENTS' EXHIBIT NO. 84

NEW ENGLAND ELECTRIC SYSTEM AND SUBSIDIARIES

Consolidated Capitalization and Ratios
As at January 1, 1960
(Thousands of Dollars)

	Massachusetts Gas Subsidiaries Consolidated		Other, i.e., NEES itself, its Electric and Other Subsidiaries		Consolidated	
	Amount	Per Cent	Amount	Per Cent	Amount	Per Cent
Funded Debt						
Subsidiaries	$15,989	29.56	$227,932	41.13	$243,921	42.07
NEES			64,611	11.66	64,611	11.14
Total Funded Debt	15,989	29.56	292,543	52.79	308,532	53.21
Preferred Stocks of Subsidiaries			50,437	9.10	50,437	8.70
Cumulative Total	15,989	29.56	342,980	61.89	358,969	61.91
Notes Payable - Conversion Loans	1,380	2.55			1,380	.24
Notes Payable - Short-term	7,570	14.00	13,670	2.47	19,850	3.42
Cumulative Total	24,939	46.11	356,650	64.36	380,199	65.57
Minority Interests in Subsidiaries' Common Stocks			666	.12	1,457	.25
Cumulative Total	24,939	46.11	357,316	64.48	381,656	65.82
Share Capital Including Surplus	29,149	53.89	196,843	35.52	198,167	34.18
Cumulative Total	$54,088	100.00	$554,159	100.00	$579,823	100.00

NEW ENGLAND ELECTRIC SYSTEM

Gas Properties and Investments in Subsidiaries Sold or Disposed of
1947 - 1959

	Year of Sale or Disposition	Net Plant, Materials and Supplies etc.	NEES Investment in Stock	NEES Investment in Notes and Advances	NEES Investment in Total	Consideration Received	Loss on Sale or Disposition	Loss in Consolidation
Athol Gas Company (A)	1954	$ 156,644.49	$100,000.00	$111,880.05	$211,880.05	$ 750.00	$ 155,894.49	$ 155,894.49 (G)
Berkshire Gas Company (B)	1954		698,281.85		698,281.85	662,500.00	35,781.85	42,630.26
Blackstone Gas Company (C)	1955		50,144.17	22,160.44	72,304.61	6,000.00	66,304.61	19,672.79 (G)
Haverhill Electric Company (D)	1950	213,079.34				197,839.18	15,240.16	10,419.39 (H)
Narragansett Electric Co., The(E)	1959	1,961,278.41				552,298.54	1,408,979.87	862,979.87 (I)
Pequot Gas Company, The (F)	1959		150,000.00	30,000.00	180,000.00	35,000.00	145,000.00	129,387.89
Totals						$1,454,387.72	$1,827,200.98	$1,220,984.69

(A) Net Plant plus materials and supplies sold to Midstate Gas Co. on March 24, 1954.

(B) Sold to Pittsfield Coal Gas Company on July 22, 1954.

(C) Sold to Ralph W. Sullivan.

(D) Sold to Haverhill Gas Light Company.

(E) Sold to South County Gas Company and Bristol and Warren Gas Company.

(F) Sold to a group of purchasers: James M. Malloy, Morton Myerson, Ralph W. Sullivan, Robert L. Gourley, M. D. Gourley and H. T. Sullivan.

(G) Including adjustments to general reserve relating to investments.

(H) Majority portion charged against income in consolidation.

(I) After deducting $546,000 reduction in federal income taxes from loss on sale.

NEW ENGLAND ELECTRIC SYSTEM MASSACHUSETTS GAS SUBSIDIARIES CONSOLIDATED
INCOME STATEMENTS
FOR THE YEAR ENDED DECEMBER 31, 1960

	Central Mass. Gas Company	Lawrence Gas Company	Lynn Gas Company	Mystic Valley Gas Company	Northampton Gas Light Company	North Shore Gas Company	Norwood Gas Company	Wachusett Gas Company	Eliminations	Gas Subsidiaries Consolidated
Gross Earnings										
Gas Sales	$1,257,599	$3,878,061	$4,290,075	$11,132,317	$992,122	$3,908,959	$668,094	$928,562		$27,055,789
Other Operating Revenue	1,824	1,490	100,352	8,343	27,829	24,621	150	628		165,237
Total Operating Revenues	1,259,423	3,879,551	4,390,427	11,140,660	1,019,951	3,933,580	668,244	929,190		27,221,025
Merchandising and Jobbing	9	32,838	10,831	(56,439)	5,008	(3,131)	(5,618)	243		(16,259)
Other Income	5,183	13,193	26,098	51,269	4,849	16,316	2,173	4,829		123,910
Total Gross Earnings	1,264,615	3,925,582	4,427,356	11,135,490	1,029,808	3,946,765	664,799	934,262		27,328,677
Operating Expenses and Taxes										
Operating Costs	304,544	975,933	1,336,489	2,628,566	294,707	1,123,364	166,124	257,212		7,086,939
Purchased Gas	495,046	1,524,589	1,420,467	3,677,307	344,430	1,186,707	226,998	307,424		9,182,968
Maintenance ex. Amortization of Conversion Costs	71,059	209,556	342,239	1,087,203	43,408	212,129	34,309	55,480		2,055,383
Amortization of Cost of Converting Consumers' Appliances	21,060	86,520	115,615	256,320	20,628	90,840	12,120	17,940		621,043
Depreciation	65,000	165,000	180,000	510,000	55,000	230,000	34,000	45,000		1,284,000
Total Operating Expenses	956,709	2,961,598	3,394,810	8,159,396	758,173	2,843,040	473,551	683,056		20,230,333
Taxes - Municipal and State	82,965	266,604	531,953	1,048,654	68,961	295,564	32,653	60,122		2,367,475
Taxes - Federal (Other than Income)	6,498	17,477	28,278	54,979	5,502	18,774	2,890	4,295		138,693
Taxes - Federal Income	91,349	245,952	197,555	575,458	72,782	254,166	54,289	67,480		1,562,031
Total Taxes	163,812	530,033	757,786	1,679,091	147,245	568,504	89,832	131,897		4,068,200
Total Operating Expenses and Taxes	1,120,521	3,491,631	4,152,596	9,838,487	905,418	3,411,544	563,383	814,953		24,298,533
Gross Income (Balance before Interest)	144,094	433,951	274,760	1,297,003	124,390	535,221	101,416	119,309		3,030,144
Income Deductions										
Interest on Long-term Debt		120,000	46,025	409,375		135,000				710,400
Interest on Conversion Notes Payable	2,033	8,489	64	21,655	1,981	8,032		1,728		43,982
Amortization of Debt Discount and Expense		1,225		305		2,203				3,733
Interest on Short-term Notes Payable	40,350	38,553	29,397	127,360	26,483	58,584	45,545	39,008		405,280
Other Interest Expense	381	1,740	1,170	7,972	635	1,876	1,057	747		15,579
Interest during Construction - Credit		2,906	2,284	4,960	2,501	160				12,811
Other Charges against Income			534	5,947						6,481
Total Income Deductions	42,764	167,101	74,906	567,854	28,598	205,535	46,602	41,483		1,272,843
Net Income before Dividends	$ 101,330	$ 266,850	$ 199,854	$ 729,149	$ 97,792	$ 329,686	$ 54,814	$ 77,826		$1,857,301
Minority Interest in Net Income		$ 25,546	$ 12,467	$ 4,267		$ 7,474	$ 338			$ 50,092
Net Income Applicable to NEES	$ 101,330	241,304	187,387	725,082	$ 97,792	322,212	54,476	$ 77,826		1,807,409

() Indicates red figure

RESPONDENTS' EXHIBIT NO. 88

Res. Ex. No. #88

NEW ENGLAND ELECTRIC SYSTEM
441 STUART STREET
BOSTON 16, MASSACHUSETTS

HARRY HANSON
PRESIDENT AND TREASURER

August 20, 1959

Mr. A. E. Huson, Chief
Office of Research and Service Company Regulation
Securities and Exchange Commission
Room 329
Washington 25, D. C.

Dear Mr. Huson:

On Monday when you visited with us, I promised to send you the data set forth below:

1. The expenses of New England Electric System (NEES), on a corporate basis, for the year 1958 totaled $924,234. Of this total, about $600,000 was for salaries and expenses. Salaries aggregated $435,000, while expenses (annuity and group insurance premiums, general office rents, traveling expenses, etc.) aggregated about $165,000.

2. Of the $600,000 for salaries and expenses, it is my opinion that from 30% to 40% would be chargeable to NEES, while the balance would be chargeable to operating subsidiaries. The amount chargeable to subsidiaries would therefore be in the $350,000 to $425,000 range. I would expect that a substantial amount of this total would be chargeable to specific work for the operating subsidiaries. However, if it were allocated to the operating subsidiaries on the basis of their weighted gross revenue, the amounts chargeable to each operating company would be as set forth in the following tabulation.

Company	Percentage Allocation	Allocation of $350,000	Allocation of $425,000
...boro Electric Company	2.8%	$ 9,800	$ 11,900
...ral Massachusetts Gas Company	1.0	3,500	4,250
...ite State Electric Company	1.9	6,650	8,075
...nce Gas Company	2.8	9,800	11,900
... Gas and Electric Company	5.3	18,550	22,525
...mack-Essex Electric Company	11.5	40,250	48,875
...ystic Power Company	1.1	3,850	4,675
...io Valley Gas Company	4.8	16,800	20,400
...arragansett Electric Company	13.5	47,250	57,375
...ngland Power Company	19.2	67,200	81,600
... Shore Gas Company	2.9	10,150	12,325
...mpton Electric Lighting Company	1.6	5,600	6,800

Company	Percentage Allocation	Allocation of $350,000	Allocation of $425,000
Northampton Gas Light Company	.9%	$ 3,150	$ 3,825
Northern Berkshire Gas Company	2.7	9,450	11,475
Norwood Gas Company	.5	1,750	2,125
Quincy Electric Company	3.6	12,600	15,300
Southern Berkshire Power & Electric Company	1.2	4,200	5,100
Suburban Electric Company	5.6	19,600	23,800
Wachusett Gas Company	.8	2,800	3,400
Weymouth Light and Power Company	3.1	10,850	13,175
Worcester County Electric Company	13.2	46,200	56,100
	100.0%	$350,000	$425,000

2. I also want to confirm what I told you orally on Monday, namely, that this suggested change whereby personnel now on the NEES payroll would be transferred to the payroll of New England Power Service Company and a portion of their compensation and expenses charged to subsidiary operating companies will not in itself be a reason for seeking a rate increase. As I explained to you, one of the subsidiary operating companies, Weymouth Light and Power Company, filed new rate schedules with the Massachusetts Department of Public Utilities last week which are designed to increase revenue about $370,000 a year and this is the only rate case now pending. Our labor agreements expire the end of this year and it may very well be that higher labor costs, higher municipal taxes and other expenses will make it necessary to seek rate increases by some companies, although we have nothing definite in mind at the present time.

Sincerely yours

Harry Hanson

HH:VSR

RESPONDENTS' EXHIBIT No. 89

Res. Exhibit 89

Summary Effect on Insurance Costs Which Would Arise Through Severance of the Eight Gas Companies From The New England Electric System Holding Company System

Company	Total Insurance Cost		Increase	
	Before Severance	After Severance	Amount	%
Central Massachusetts Gas Co	$ 6,534	$ 26,070	$ 19,536	298.99%
Lawrence Gas Co	18,166	59,082	40,916	225.23
Lynn Gas Co	28,016	65,500	37,484	133.80
Mystic Valley Gas Co	50,050	146,835	96,785	193.38
Northampton Gas Co	5,885	21,709	15,824	268.89
North Shore Gas Co	22,511	67,433	44,922	199.56
Norwood Gas Co	3,061	14,220	11,159	364.55
Wachusett Gas Co	5,024	19,705	14,681	292.22
Total	$139,247	$420,554	$281,307	202.02

Central Mass. Gas. Co.
(Company)

Data Re: Insurance Coverages in Effect (Except Group Annuity)

Type of Insurance	System Coverages Year 1958		Separate Company Coverage	
	Amounts or Limits of Liability	Cost	Amounts or Limits of Liability	Estimated
All Risks Insurance				
Contents of Motor Vehicles	$100,000.	9	Would Not Insure	
Destruction of Valuable Papers	300,000.	3	$50,000.	85
Automobile Physical Damage Insurance (Fire & Theft, etc.)	20,000	22	20,000	150
Bonds				
Comprehensive Crime				
Fidelity	$300,000.	30	$300,000.	2,400
Money and Securities	100,000.		100,000.	
Forgery	100,000.		100,000.	
Collection Agents	10,000.		10,000.	
Open Stock	100,000.		100,000. Would not insure	
Water Heater Warranty Bond	Various	700		1,100
Casualty Insurance				
Workmen's Compensation	Statutory	700	Statutory	2,200
Personal Injury one person -	$100,000.		$100,000.	
one accident -	$1,000,000.		$1,000,000.	
Property Damage per accident -	$2,000,000.	500	$2,000,000.	8,700
deductible -	$1,000.		$1,000.	
Automobile Bodily Injury one person -	$200,000.	550	$200,000.	1,800
two or more -	$1,000,000.		$1,000,000.	
Automobile Property Damage per accident -	$50,000.		$50,000.	
Excess of primary (Umbrella excluding gas explosion property damage)	$4,000,000.	50	$4,000,000.	800
Legal Liability Gas Explosion (property damage)	$6,000,000.	1,700	$2,000,000.	4,500
Explosion Insurance				
Boilers, Air Tanks, etc.	150,000	110	150,000	260
Direct Damage Gas Explosion (damage to company distribution System)	$100,000.	25	$100,000.	500
Extra Expense Insurance	67,000	270	67,000	500
Fire Insurance, Extended Coverages and Vandalism & Malicious Mischief	733,600	1,400	733,600	1,400
Rents Insurance	3,900	15	3,900	15
Sprinkler Leakage Insurance	-	-	-	
Group Life, A.D.&D. and A.&H.	Scheduled See Attached Announcement	Retention 450	Scheduled See Attached Announcement	Retention 1,680
	Total	$6,534		$26,070

April, 1960

#First Year Retention $3,900

Lawrence Gas Company
(Company)

Data Re: Insurance Coverages in Effect (Except Group Annuity)

Type of Insurance	System Coverages Year 1958		Separate Company Coverage	
	Amounts or Limits of Liability	Cost	Amounts or Limits of Liability	Estimated Cost
All Risks Insurance				
Contents of Motor Vehicles	$100,000.	17	Would Not Insure	
Destruction of Valuable Papers	300,000.	12	$50,000.	85
Automobile Physical Damage Insurance (Fire & Theft, etc.)	38,300	60	38,300	270
Bonds				
Comprehensive Crime		80		
Fidelity	$300,000.		$300,000.	2,740
Money and Securities	100,000.		100,000.	
Forgery	100,000.		100,000.	
Collection Agents	10,000.		10,000.	
Open Stock	100,000.		100,000.	
Water Heater Warranty Bond	Various	1,450	Various	Would not insure 2,200
Casualty Insurance				
Workmen's Compensation	Statutory	2,200	Statutory	6,300
Personal Injury one person -	$100,000.		$100,000.	
one accident -	$1,000,000.	1,500	$1,000,000.	19,900
Property Damage per accident -	$2,000,000.		$2,000,000.	
deductible -	$1,000.		$1,000.	
Automobile Bodily Injury one person -	$200,000.	1,900	$200,000.	4,500
two or more -	$1,000,000.		$1,000,000.	
Automobile Property Damage per accident -	$50,000.		$50,000.	
Excess of primary (Umbrella excluding gas explosion property damage)	$4,000,000.	140	$4,000,000.	1,500
Legal Liability Gas Explosion (property damage)	$6,000,000.	5,200	$2,000,000.	12,500
Explosion Insurance				
Boilers, Air Tanks, etc.	750,000	225	750,000	480
Direct Damage Gas Explosion (damage to company distribution System)	$100,000.	90	$100,000.	500
Extra Expense Insurance	233,000	830	233,000	1,700
Fire Insurance, Extended Coverages and Vandalism & Malicious Mischief	2,227,600	3,200	2,227,600	3,200
Gas Insurance	-	-	-	-
Sprinkler Leakage Insurance	6,600	7	6,600	7
Group Life, A.D.&D. and A.&H.	Scheduled See Attached Announcement	Retention 1,255	Scheduled See Attached Announcement	Retention 3,200*
	Total	$18,166		$59,082

© 1960

*First Year Retention $7,480

Lynn Gas Company
(Company)

Data Re: Insurance Coverages in Effect (Except Group Annuity)

Type of Insurance	System Coverages Year 1958		Separate Company Coverage	
	Amounts or Limits of Liability	Cost	Amounts or Limits of Liability	Estimated
All Risks Insurance				
Contents of Motor Vehicles	$100,000.	7	Would Not Insure	
Destruction of Valuable Papers	300,000.	-	$50,000.	85
Automobile Physical Damage Insurance (Fire & Theft, etc.)	51,100	74	51,100	450
Bonds				
Comprehensive Crime				
Fidelity	$300,000.	45	$300,000.	2,11
Money and Securities	100,000.		100,000.	
Forgery	100,000.		100,000.	
Collection Agents	10,000.		10,000.	
Open Stock	100,000.		100,000.	Would not insure
Water Heator Warranty Bond	-	-	-	-
Casualty Insurance				
Workmen's Compensation	Statutory	4,000	Statutory	9,600
Personal Injury one person -	$100,000.		$100,000.	
one accident -	$1,000,000.	4,000	$1,000,000.	18,200
Property Damage per accident -	$2,000,000.		$2,000,000.	
deductible -	$1,000.		$1,000.	
Automobile Bodily Injury one person -	$200,000.	1,500	$200,000.	8,300
two or more -	$1,000,000.		$1,000,000.	
Automobile Property Damage per accident -	$50,000.		$50,000.	
Excess of primary (Umbrella excluding gas explosion property damage)	$4,000,000.	300	$4,000,000.	1,800
Legal Liability Gas Explosion (property damage)	$6,000,000.	6,300	$2,000,000.	9,000
Explosion Insurance				
Boilers, Air Tanks, etc.	6,000,000	270	6,000,000	1,055
Direct Damage Gas Explosion (damage to company distribution System)	$100,000.	120	$100,000.	500
Extra Expense Insurance	432,000	1,100	432,000	1,600
Fire Insurance, Extended Coverages and Vandalism & Malicious Mischief		9,000		9,000
Rents Insurance	-	-	-	-
Sprinkler Leakage Insurance	-	-	-	-
Group Life, A.D.&D. and A.&H.	Scheduled See Attached Announcement	Retention 1,300	Scheduled See Attached Announcement	Retent 3,80
	Total	$28,016		$65,50

April, 1960

Mystic Valley Gas Co.
(Company)

Data Re: Insurance Coverages in Effect (Except Group Annuity)

Type of Insurance	System Coverages Year 1958		Separate Company Coverage	
	Amounts or Limits of Liability	Cost	Amounts or Limits of Liability	Estimated Co
All Risks Insurance				
Contents of Motor Vehicles	$100,000.	60	Would Not Insure	
Destruction of Valuable Papers	300,000.	40	$50,000.	85
Automobile Physical Damage Insurance (Fire & Theft, etc.)	139,000	160	139,000	920
Bonds				
Comprehensive Crime				
Fidelity	$300,000.	240	$300,000.	3,460
Money and Securities	100,000.		100,000.	
Forgery	100,000.		100,000.	
Collection Agents	10,000.		10,000.	
Open Stock	100,000.		100,000.	Would not insure
Water Heater Warranty Bond	Various	4,400	Various	6,600
Casualty Insurance				
Workmen's Compensation	Statutory	5,600	Statutory	19,600
Personal Injury one person -	$100,000.		$100,000.	
one accident -	$1,000,000.		$1,000,000.	
Property Damage per accident -	$2,000,000.	3,600	$2,000,000.	45,300
deductible -	$1,000.		$1,000.	
Automobile Bodily Injury one person -	$200,000.	4,100	$200,000.	16,400
two or more -	$1,000,000.		$1,000,000.	
Automobile Property Damage per accident -	$50,000.		$50,000.	
Excess of primary (Umbrella excluding gas explosion property damage)	$4,000,000.	490	$4,000,000.	3,300
Legal Liability Gas Explosion (property damage)	$6,000,000.	16,100	$2,000,000.	30,000
Explosion Insurance				
Boilers, Air Tanks, etc.	1,250,000	950	1,250,000	1,660
Direct Damage Gas Explosion (damage to company distribution System)	$100,000.	270	$100,000.	500
Extra Expense Insurance	566,000	2,200	566,000	3,300
Fire Insurance, Extended Coverages and Vandalism & Malicious Mischief	6,660,700	8,000	6,660,700	8,000
Plants Insurance	37,800	45	37,800	45
Sprinkler Leakage Insurance	8,200	25	8,200	25
Group Life, A.D.A.D. and A.&H.	Scheduled See Attached Announcement	Retention 3,770	Scheduled See Attached Announcement	Retention 7,640*
		Total $50,050		$146,835

April 1, 1960

*First Year Retention $15,880

North Shore Gas Co.
(Company)

Data Re: Insurance Coverages in Effect (Except Group Annuity)

Type of Insurance	System Coverages Year 1958		Separate Company Coverage	
	Amounts or Limits of Liability	Cost	Amounts or Limits of Liability	Estimated
All Risks Insurance				
Contents of Motor Vehicles	$100,000.	18	Would Not Insure	
Destruction of Valuable Papers	300,000.	15	$50,000.	85
Automobile Physical Damage Insurance (Fire & Theft, etc.)	34,400	30	34,400	350
Bonds				
Comprehensive Crime				
Fidelity	$300,000.	90	$300,000.	2,620
Money and Securities	100,000.		100,000.	
Forgery	100,000.		100,000.	
Collection Agents	10,000.		10,000.	
Open Stock	100,000.		100,000.	
Water Heater Warranty Bond	Various	2,500	Would not insure Various	3,800
Casualty Insurance				
Workmen's Compensation	Statutory	1,700	Statutory	6,900
Personal Injury one person -	$100,000.	1,300	$100,000.	21,700
one accident -	$1,000,000.		$1,000,000.	
Property Damage per accident -	$2,000,000.		$2,000,000.	
deductible -	$1,000.		$1,000.	
Automobile Bodily Injury one person -	$200,000.	1,400	$200,000.	4,300
two or more -	$1,000,000.		$1,000,000.	
Automobile Property Damage per accident -	$50,000.		$50,000.	
Excess of primary (Umbrella excluding gas explosion property damage)	$4,000,000.	180	$4,000,000.	1,500
Legal Liability Gas Explosion (property damage)	$6,000,000.	5,550	$2,000,000.	12,500
Explosion Insurance				
Boilers, Air Tanks, etc.	1,000,000	490	1,000,000	970
Direct Damage Gas Explosion (damage to company distribution System)	$100,000.	90	$100,000.	500
Extra Expense Insurance	152,000	650	152,000	1,300
Fire Insurance, Extended Coverages and Vandalism & Malicious Mischief	3,635,900	7,000	3,635,900	7,000
Rents Insurance	37,740	120	37,740	120
Sprinkler Leakage Insurance	11,780	18	11,780	18
Group Life, A.D.&D. and A.&H.	Scheduled See Attached Announcement	Retention 1,360	Scheduled See Attached Announcement	Retention 3,770
	Total	$22,511		$67,433

*First Year Retention $8,530

April, 1960

Northampton Gas Light Co.
(Company)

Data Re: Insurance Coverages in Effect (Except Group Annuity)

Type of Insurance	System Coverages Year 1958		Separate Company Coverage	
	Amounts or Limits of Liability	Cost	Amounts or Limits of Liability	Estimated Cost
All Risks Insurance				
Contents of Motor Vehicles	$100,000.	6	Would Not Insure	
Destruction of Valuable Papers	300,000.	4	$50,000.	85
Automobile Physical Damage Insurance (Fire & Theft, etc.)	19,800	23	19,800	110
Bonds				
Comprehensive Crime				
Fidelity	$300,000.	33	$300,000.	2,400
Money and Securities	100,000.		100,000.	
Forgery	100,000.		100,000.	
Collection Agents	10,000.		10,000.	
Open Stock	100,000.		100,000. Would not insure	
Water Heater Warranty Bond	Various	560	Various	840
Casualty Insurance				
Workmen's Compensation	Statutory	700	Statutory	1,900
Personal Injury one person - $100,000. one accident - $1,000,000.		400	$100,000. $1,000,000.	7,000
Property Damage per accident - $2,000,000. deductible - $1,000.			$2,000,000. $1,000.	
Automobile Bodily Injury one person - $200,000. two or more - $1,000,000.		500	$200,000. $1,000,000.	970
Automobile Property Damage per accident - $50,000.			$50,000.	
Excess of primary (Umbrella excluding gas explosion property damage)	$4,000,000.	45	$4,000,000.	800
Legal Liability Gas Explosion (property damage)	$6,000,000.	1,400	$2,000,000.	3,500
Explosion Insurance				
Boilers, Air Tanks, etc.	200,000	180	200,000	390
Direct Damage Gas Explosion (damage to company distribution System)	$100,000.	20	$100,000.	500
Extra Expense Insurance	58,000	200	58,000	400
Fire Insurance, Extended Coverages and Vandalism & Malicious Mischief	1,142,100	1,470	1,142,100	1,470
Plants Insurance	46,400	44	46,400	44
Sprinkler Leakage Insurance	-	-	-	-
Group Life, A.D.&D. and A.&H.	Scheduled See Attached Announcement	Retention 300	Scheduled See Attached Announcement	Retention* 1,300
	Total	$5,385		$ 21,709

April, 1960

*First Year Retention $2,900

Norwood Gas Company
(Company)

Data Re: Insurance Coverages in Effect (Except Group Annuity)

Type of Insurance	System Coverages Year 1958		Separate Company Coverage	
	Amounts or Limits of Liability	Cost	Amounts or Limits of Liability	Estimated C
All Risks Insurance				
Contents of Motor Vehicles	$100,000.	5	Would Not Insure	
Destruction of Valuable Papers	300,000.	2	$50,000.	85
Automobile Physical Damage Insurance (Fire & Theft, etc.)	11,200	14	11,200	80
Bonds				
Comprehensive Crime				
Fidelity	$300,000.	21	$300,000.	2,500
Money and Securities	100,000.		100,000.	
Forgery	100,000.		100,000.	
Collection Agents	10,000.		10,000.	
Open Stock	100,000.		100,000. Would not insure	
Water Heater Warranty Bond	Various	290	Various	430
Casualty Insurance				
Workmen's Compensation	Statutory	300	Statutory	800
Personal Injury one person -	$100,000.		$100,000.	
one accident -	$1,000,000.		$1,000,000.	
Property Damage per accident -	$2,000,000.	300	$2,000,000.	3,000
deductible -	$1,000.		$1,000.	
Automobile Bodily Injury one person -	$200,000.	300	$200,000.	1,300
two or more -	$1,000,000.		$1,000,000.	
Automobile Property Damage per accident -	$50,000.		$50,000.	
Excess of primary (Umbrella excluding gas explosion property damage)	$4,000,000.	18	$4,000,000.	800
Legal Liability Gas Explosion (property damage)	$6,000,000.	840	$2,000,000.	2,500
Explosion Insurance				
Boilers, Air Tanks, etc.	50,000	40	50,000	85
Direct Damage Gas Explosion (damage to company distribution System)	$100,000.	12	$100,000.	500
Extra Expense Insurance	59,000	290	59,000	500
Fire Insurance, Extended Coverages and Vandalism & Malicious Mischief	113,150	460	113,150	460
Rents Insurance	3,760	9	3,760	9
Sprinkler Leakage Insurance	-	-	-	-
Group Life, A.D.&D. and A.&H.	Scheduled See Attached Announcement	Retention 160	Scheduled See Attached Announcement	Retention 1,090
	Total	$3,061		$14,220

April, 1960

*First Year Retention $1,930

Yachusett Gas Company
(Company)

Data Re: Insurance Coverages in Effect (Except Group Annuity)

Type of Insurance	System Coverages Year 1958		Separate Company Coverage	
	Amounts or Limits of Liability	Cost	Amounts or Limits of Liability	Estimated Cost
All Risks Insurance				
Contents of Motor Vehicles	$100,000.	8	Would Not Insure	
Destruction of Valuable Papers	300,000.	3	$50,000.	85
Automobile Physical Damage Insurance (Fire & Theft, etc.)	15,800	19	15,800	130
Bonds				
Comprehensive Crime				
Fidelity	$300,000.	21	$300,000.	2,380
Money and Securities	100,000.		100,000.	
Forgery	100,000.		100,000.	
Collection Agents	10,000.		10,000.	
Open Stock	100,000.		100,000.	Would not insure
Water Heater Warranty Bond	Various	530	Various	800
Casualty Insurance				
Workmen's Compensation	Statutory	700	Statutory	1,600
Personal Injury one person -	$100,000.		$100,000.	
one accident -	$1,000,000.		$1,000,000.	
Property Damage per accident -	$2,000,000.	400	$2,000,000.	5,970
deductible -	$1,000.		$1,000.	
Automobile Bodily Injury one person -	$200,000.		$200,000.	
two or more -	$1,000,000.	600	$1,000,000.	1,600
Automobile Property Damage per accident -	$50,000.		$50,000.	
Excess of primary (Umbrella excluding gas explosion property damage)	$4,000,000.	21	$4,000,000.	800
Legal Liability Gas Explosion (property damage)	$6,000,000.	1,360	$2,000,000.	3,000
Explosion Insurance				
Boilers, Air Tanks, etc.	100,000	50	100,000	110
Direct Damage Gas Explosion (damage to company distribution System)	$100,000.	22	$100,000.	500
Extra Expense Insurance	46,000	190	46,000	400
Fire Insurance, Extended Coverages and Vandalism & Malicious Mischief	491,600	870	491,600	870
Plants Insurance	-	-	-	-
Sprinkler Leakage Insurance	-	-	-	-
Group Life, A.D.&D. and A.&H.	Scheduled See Attached Announcement	Retention 230	Scheduled See Attached Announcement	Retention* 1,460
		Total $5,024		$19,705

April, 1960

*First Year Retention $2,660

SCHEDULE OF INSURANCE

Rate of Annual Earnings of.....	Class "A" Less than $1,501.00	Class "B" $1,501.00 but less than $2,501.00	Class "C" $2,501.00 but less than $3,501.00	Class "D" $3,501.00 but less than $5,001.00	Class "E" $5,001.00 but less than $7,501.00	Class "F" $7,501.00 but less than $10,001.00	Class "G" $10,001.00 or more
1. Life Insurance							
A. Death Benefit							
Payable in Lump Sum at death of employee to the named beneficiary.....	Class "A" $1,000.00	Class "B" $2,000.00	Class "C" $3,000.00	Class "D" $5,000.00	Class "E" $10,000.00	Class "F" $15,000.00	Class "G" $19,500.00
OR							
B. Total and Permanent Disability Benefit	Class "A"	Class "B"	Class "C"	Class "D"	Class "E"	Class "F"	Class "G"
1. Amount of Monthly Instalments.....	$51.04	$52.50	$54.00	$90.00	$180.00	$270.00	$351.00
2. Number of Months.....	20	40	60	60	60	60	60

If you become totally and permanently disabled while insured under the Plan and prior to age 60, through either sickness or accident, the Life Insurance will be payable to you, during the continuance of such disability in monthly instalments as indicated. These amounts will be paid to the insured employee immediately upon receipt of due proof of total and permanent disability by the Insurance Company.

2. Accidental Death and Dismemberment Insurance—Additional Benefits	Class "A"	Class "B"	Class "C"	Class "D"	Class "E"	Class "F"	Class "G"
A. Accidental Death Benefit.....	$1,000.00	$2,000.00	$3,000.00	$4,000.00	$5,000.00	$5,000.00	$5,000.00

Payable in lump sum at death resulting from an accident *in addition* to Life Insurance Benefits.

B. Accidental Dismemberment Benefit	Class "A"	Class "B"	Class "C"	Class "D"	Class "E"	Class "F"	Class "G"
1. Loss of Two Major Members.....	$1,000.00	$2,000.00	$3,000.00	$4,000.00	$5,000.00	$5,000.00	$5,000.00

Payable in lump sum *in addition* to total and permanent disability benefits of the Life Insurance Coverage, should an employee become totally disabled through loss by accident of both eyes, both hands, both feet, one hand and one foot or similar dismemberment.

	Class "A"	Class "B"	Class "C"	Class "D"	Class "E"	Class "F"	Class "G"
2. Loss of One Major Member.....	$500.00	$1,000.00	$1,500.00	$2,000.00	$2,500.00	$2,500.00	$2,500.00

Payable in lump sum should the insured employee lose one member of his body by accident, for instance one hand, one foot or one eye.

Note—Benefits outlined under Accidental Death and Dismemberment Insurance are payable only when Accidental Death or Dismemberment occurs within 90 days from date of accident.

3. Weekly Sickness and Non-Occupational Accident Benefits	Class "A"	Class "B"	Class "C"	Class "D"	Class "E"	Class "F"	Class "G"
	$10.00	$15.00	$20.00	$25.00	$30.00	$30.00	$30.00

Payable for each full day of disability after attendance by a licensed practicing physician beginning with the eighth day of disability for a period of twenty-six weeks for any one sickness or any one non-occupational accident. The period of disability may be either continuous or intermittent. No weekly benefits are payable for any period of disability resulting from injuries arising out of, or in the course of, any employment for wage or profit.

4. Weekly Cost of All Above Insurance to Each Employee	Class "A"	Class "B"	Class "C"	Class "D"	Class "E"	Class "F"	Class "G"
	25 cents	50 cents	75 cents	$1.25	$2.35	$3.04	$3.66

5. Automatic Increases

In addition to the preceding amounts, each employee will receive on the anniversary date of his entrance into the Group Insurance Plan an increase of $100.00 of Life Insurance and $100.00 Accidental Death and Dismemberment Insurance until five such increases have been made. The entire cost of these increases will be paid by the employer.

6. Optional Methods of Payment

The amounts designated as payable in a lump sum under the Life Insurance will, if you so elect, or if after your death your beneficiary elects, be paid over a period in monthly instalments instead of in a single payment.

SEE REVERSE OF THIS PAGE FOR SPECIAL FEATURES OF THIS PLAN

MASSACHUSETTS GAS COMPANIES
1958 OPERATING EXPENSES PER CUSTOMER
(EXCLUDING PRODUCTION AND PURCHASED GAS)

Company	Customers 12/31/58	Transmission and Distribution Amount	Transmission and Distribution Per Cust.	Utilization(a) Amount	Utilization(a) Per Cust.	Commercial Amount	Commercial Per Cust.	New Business Amount	New Business Per Cust.	Pensions and Welfare Amount	Pensions and Welfare Per Cust.	Administrative and General Total	Administrative and General Less Depreciation	Administrative and General Less Pensions and Welfare	Administrative and General Balance	Administrative and General Per Cust.	Total-Actual Amount	Total-Actual Per Cust.	Total-Pro Forma(b) Amount	Total-Pro Forma(b) Per Cust.
New England Electric System Mass. Gas Companies:																				
Central Mass. Gas	9,595	$ 72,413	$ 7.55	$ 39,691	$4.14	$ 57,977	$6.04	$ 61,102	$6.37	$ 31,422	$3.27	$ 147,187	$ 52,000	$ 31,422	$ 63,765	$ 6.65	$ 326,370	$34.02	$ 423,770	$44.17
Lawrence Gas	32,801	212,882	6.49	107,878	3.29	124,791	3.80	211,570	6.45	95,425	2.91	608,608	150,000	95,425	163,183	4.97	915,729	27.91	1,111,029	33.87
Lynn (Gas Dept.)	40,922	274,064	6.70	85,990	2.10	190,218	4.65	150,497	3.68	134,805	3.29	519,347	171,357	134,805	213,185	5.21	1,048,759	25.63	1,385,259	33.85
Mystic Valley Gas	98,773	677,680	6.86	414,899	4.20	479,941	4.86	517,692	5.24	276,683	2.80	1,230,030	450,000	276,683	503,347	5.10	2,870,242	29.06	3,266,342	33.07
Northampton Gas	8,023	61,124	7.62	30,237	3.77	28,699	3.58	39,643	4.94	27,801	3.47	147,664	40,000	27,801	79,863	9.95	267,367	33.33	343,867	42.86
North Shore Gas	33,113	179,262	5.41	72,820	2.20	158,246	4.78	191,644	5.79	128,968	3.89	529,565	212,000	128,968	188,597	5.70	919,537	27.77	1,076,637	32.51
Norwood Gas	4,190	26,695	5.95	17,892	3.98	25,556	5.69	27,413	6.11	11,256	2.51	87,342	27,000	11,256	49,086	10.93	157,898	35.17	187,998	41.87
Wachusett Gas	8,048	65,336	8.12	25,401	3.16	41,066	5.10	45,939	5.71	18,006	2.24	117,189	36,000	18,006	61,183	7.60	256,931	31.93	353,731	43.95
NEES Mass. Gas Companies Average	235,765	1,569,456	6.66	794,808	3.37	1,106,494	4.69	1,245,500	5.28	724,366	3.07	3,186,932	1,140,357	724,366	1,322,209	5.61	6,762,833	28.68	8,148,633	34.56
Other Non-affiliated Mass. Gas Cos. with over 5,000 Meters:																				
Berkshire Gas	24,963	150,219	6.02	104,368	4.18	179,678	7.20	108,347	4.34	61,147	2.45	407,017	132,132	61,147	213,738	8.56	817,497	32.75		
Boston Gas	305,248	3,549,901	11.63	1,741,223	5.70	2,071,660	6.79	1,306,796	4.28	852,000	2.79	3,639,937	1,263,700	852,000	1,524,237	4.99	11,045,817	36.18		
Brockton-Taunton Gas	52,955	447,739	8.62	215,460	4.15	363,049	6.99	231,829	4.46	91,883	1.77	752,138	214,331	91,883	445,924	8.58	1,795,884	34.57		
Buzzards Bay Gas	5,454	75,095	13.77	37,819	6.93	58,349	10.70	114,134	20.93	6,216	1.14	163,090	43,718	6,216	113,156	20.75	404,769	74.22		
Cambridge Gas	49,653	290,296	5.85	257,054	5.18	284,674	5.73	365,908	7.37	183,825	3.70	634,977	163,124	183,825	288,028	5.80	1,669,785	33.63		
Fall River Gas	34,576	181,404	5.25	102,318	2.96	143,605	4.15	435,241	12.59	99,391	2.87	511,793	158,748	99,391	253,654	7.34	1,215,613	35.16		
Fitchburg (Gas Dept.)	10,967	88,882	8.10	31,894	2.91	49,000	4.47	44,679	4.07	23,900	2.18	162,507	46,019	23,900	92,588	8.44	330,943	30.17		
Haverhill Gas	19,786	204,669	10.34	91,429	4.62	130,361	6.59	106,632	5.39	75,860	3.83	392,057	96,000	75,860	220,207	11.13	829,158	41.90		
Lowell Gas	29,206	124,489	4.26	103,571	3.55	192,110	6.58	250,165	8.57	50,687	1.74	490,834	171,701	50,687	268,446	9.19	989,468	33.89		
New Bedford (Gas Dept.)	43,173	353,525	8.19	115,333	2.67	146,685	3.40	203,050	4.70	143,289	3.32	521,278	177,738	143,289	200,251	4.64	1,162,133	26.92		
Springfield Gas	66,179	503,986	7.62	459,535	6.94	428,423	6.47	441,206	6.67	163,650	2.47	1,049,902	290,000	163,650	596,252	9.01	2,593,052	39.18		
Worcester Gas	77,940	1,173,322	15.05	447,523	5.74	536,588	6.88	775,595	9.95	356,196	4.57	1,443,519	492,129	356,196	595,194	7.64	3,884,418	49.83		
Other Companies Average	719,100	7,143,527	9.93	3,707,527	5.16	4,584,182	6.37	4,383,582	6.10	2,108,044	2.93	10,169,059	3,249,340	2,108,044	4,811,675	6.69	26,738,537	37.18		
Average of all above Mass. Gas Companies	954,865	$8,712,983	$9.12	$4,502,335	$4.72	$5,690,676	$5.96	$5,629,082	$5.90	$2,832,410	$2.97	$13,355,991	$4,389,697	$2,832,410	$5,133,884	$6.42	$33,501,370	$35.09		

(a) Not including Amortization of Conversion Costs as extent and timing of conversion to high BTU gas is not consistent.

(b) Figures in these columns are actual expenses plus additional estimated expenses if NEES gas companies were independently operated.

RESPONDENTS' EXHIBIT NO. 90

RESPONDENTS' EXHIBIT NO. 92

Gas Companies

Data Re: Insurance Coverages in Effect (Except Group Annuity)

Type of Insurance	System Coverages Year 1958 Combined		Under Common Control i.e., If Majority Voting Stock Owned by Same Interest		Independently Owned Companies	
	Amounts or Limits of Liability	Cost	Amounts or Limits of Liability	Estimated Cost	Amounts or Limits of Liability	Estimated Cost
All Risks Insurance						
Contents of Motor Vehicles	$100,000	130	Would not insure		Would not insure	
Destruction of Valuable Papers	300,000	79	50,000	79	50,000	680
Automobile Physical Damage Insurance (Fire & Theft, etc.)	$329,600	402	329,600	1,300	329,600	2,460
Bonds						
Comprehensive Crime		560		6,700		20,610
Fidelity	$300,000		300,000		300,000	
Money and Securities	100,000		100,000		100,000	
Forgery	100,000		100,000		100,000	
Collection Agents	10,000		10,000		10,000	
Open Stock	100,000		100,000	Would not insure	100,000	Would not insure
Water Heater Warranty Bond	Various	10,430		10,430		15,770
Casualty Insurance						
Workmen's Compensation	Statutory	15,900	Statutory	21,700*	Statutory	48,900
Personal Injury one person -	$100,000		100,000		100,000	
one accident -	$1,000,000	12,000	1,000,000	114,600	1,000,000	129,770
Property Damage per accident -	$2,000,000		2,000,000		2,000,000	
deductible -	$1,000		1,000		1,000	
Automobile Bodily Injury one person -	$200,000	10,850	200,000	36,170	200,000	39,170
two or more -	$1,000,000		1,000,000		1,000,000	
Automobile Property Damage per accident -	350,000		50,000		50,000	
Excess of primary (Umbrella excluding gas explosion property damage)	$4,000,000	1,244	4,000,000	8,000	4,000,000	11,300
Legal Liability Gas Explosion (property damage)	$6,000,000	38,450	6,000,000	38,450	2,000,000	77,500
Explosion Insurance						
Boilers, Air Tanks, etc.	$1.250,000	2,315	1,250,000	4,100	1,250,000	4,991
Direct Damage Gas Explosion (damage to company distribution System)	$100,000	649	100,000	649	100,000	4,000
Extra Expense Insurance	1,613,000	5,730	1,613,000	5,730	1,613,000	9,780
Fire, Insurance, Extended Coverages and Vandalism & Malicious Mischief	22,735,470	31,400	22,735,470	31,400	22,735,470	31,400
Rents Insurance	129,600	233	129,600	233	129,600	233
Sprinkler Leakage Insurance	26,580	50	26,580	50	26,580	50
Group Life, A.D.&D. and A.&H.	Scheduled See Attached Announcement	Retention 8,825	Scheduled See Attached Announcement	Retention 14,160**	Scheduled See Attached Announcement	Retention 23,910***
	Total	$139,247		$293,751		$420,554

*Minimum $9,800 - Maximum $66,200
**First year retention - $26,700
***First year retention - $43,280

SCHEDULE OF INSURANCE

Rate of Annual Earnings of.....	Class "A" Less than $1,501.00	Class "B" $1,501.00 but less than $2,501.00	Class "C" $2,501.00 but less than $3,501.00	Class "D" $3,501.00 but less than $5,001.00	Class "E" $5,001.00 but less than $7,501.00	Class "F" $7,501.00 but less than $10,001.00	Class "G" $10,001.00 or more
1. Life Insurance							
A. Death Benefit							
Payable in Lump Sum at death of employee to the named beneficiary.....	Class "A" $1,000.00	Class "B" $2,000.00	Class "C" $3,000.00	Class "D" $5,000.00	Class "E" $10,000.00	Class "F" $15,000.00	Class "G" $19,500.00
OR							
B. Total and Permanent Disability Benefit	Class "A"	Class "B"	Class "C"	Class "D"	Class "E"	Class "F"	Class "G"
1. Amount of Monthly Instalments.....	$51.04	$52.50	$54.00	$90.00	$180.00	$270.00	$351.00
2. Number of Months.....	20	40	60	60	60	60	60

If you become totally and permanently disabled while insured under the Plan and prior to age 60, through either sickness or accident, the Life Insurance will be payable to you, during the continuance of such disability in monthly instalments as indicated. These amounts will be paid to the insured employee immediately upon receipt of due proof of total and permanent disability by the Insurance Company.

2. Accidental Death and Dismemberment Insurance—Additional Benefits	Class "A"	Class "B"	Class "C"	Class "D"	Class "E"	Class "F"	Class "G"
A. Accidental Death Benefit.....	$1,000.00	$2,000.00	$3,000.00	$4,000.00	$5,000.00	$5,000.00	$5,000.00

Payable in lump sum at death resulting from an accident *in addition* to Life Insurance Benefits.

B. Accidental Dismemberment Benefit	Class "A"	Class "B"	Class "C"	Class "D"	Class "E"	Class "F"	Class "G"
1. Loss of Two Major Members.....	$1,000.00	$2,000.00	$3,000.00	$4,000.00	$5,000.00	$5,000.00	$5,000.00

Payable in lump sum *in addition* to total and permanent disability benefits of the Life Insurance Coverage, should an employee become totally disabled through loss by accident of both eyes, both hands, both feet, one hand and one foot or similar dismemberment.

	Class "A"	Class "B"	Class "C"	Class "D"	Class "E"	Class "F"	Class "G"
2. Loss of One Major Member.....	$500.00	$1,000.00	$1,500.00	$2,000.00	$2,500.00	$2,500.00	$2,500.00

Payable in lump sum should the insured employee lose one member of his body by accident, for instance one hand, one foot or one eye.

Note—Benefits outlined under Accidental Death and Dismemberment Insurance are payable only when Accidental Death or Dismemberment occurs within 90 days from date of accident.

3. Weekly Sickness and Non-Occupational Accident Benefits	Class "A"	Class "B"	Class "C"	Class "D"	Class "E"	Class "F"	Class "G"
	$10.00	$15.00	$20.00	$25.00	$30.00	$30.00	$30.00

Payable for each full day of disability after attendance by a licensed practicing physician beginning with the eighth day of disability for a period of twenty-six weeks for any one sickness or any one non-occupational accident. The period of disability may be either continuous or intermittent. No weekly benefits are payable for any period of disability resulting from injuries arising out of, or in the course of, any employment for wage or profit.

4. Weekly Cost of All Above Insurance to Each Employee	Class "A"	Class "B"	Class "C"	Class "D"	Class "E"	Class "F"	Class "G"
	25 cents	50 cents	75 cents	$1.25	$2.35	$3.04	$3.66

5. Automatic Increases

In addition to the preceding amounts, each employee will receive on the anniversary date of his entrance into the Group Insurance Plan an increase of $100.00 of Life Insurance and $100.00 Accidental Death and Dismemberment Insurance until five such increases have been made. The entire cost of these increases will be paid by the employer.

6. Optional Methods of Payment

The amounts designated as payable in a lump sum under the Life Insurance will, if you so elect, or if after your death your beneficiary elects, be paid over a period in monthly instalments instead of in a single payment.

SEE REVERSE OF THIS PAGE FOR SPECIAL FEATURES OF THIS PLAN

RESPONDENTS' EXHIBIT NO. 92A

Res. Ex. 92A

NEW ENGLAND ELECTRIC SYSTEM
441 STUART STREET
BOSTON 16, MASSACHUSETTS

HARRY HANSON
VICE PRESIDENT AND TREASURER

January 4, 1961

Mr. Samuel Gishman
Assistant Chief Financial Analyst
Branch of Public Utility Regulation
Securities and Exchange Commission
Washington 25, D. C.

Dear Mr. Gishman:

This is in answer to your telephone inquiry to Mr. R. B. Dunn concerning (1) an explanation of the difference between the two figures relating to insurance in Exhibit 91 and how the insurance cost was arrived at and (2) additional information as to blanket coverages and allocation of costs with respect to insurance shown in Exhibit 89.

With respect to (1) above, the difference between the figure of $127,000 shown in paragraph A at the top of page 38 in Exhibit 91 and the $120,600 in the last column on page 40 represents the amount of insurance savings which would affect other than income accounts in the year 1958. The figure of $127,000 represents the gross savings in insurance costs which would be realized under combined operation as compared with independent operations (see Exhibit 92).

With respect to (2) above, all of the policies shown in Exhibit 89 were systemwide blanket policies with the exception of the Water Heater Warranty Bond, Legal Liability Gas Explosion, Direct Damage Gas Explosion, and Extra Expense Insurance which were blanket policies for the gas companies only, and a few small policies written for Lynn Gas and Electric Company prior to acquisition still in effect. However, certain of the blanket policies were not applicable to every company since in the case of certain companies no risk or exposure was involved. Of course, in this event no part of the cost was allocated to such companies.

We are attaching a schedule showing the allocation of costs for each of the coverages between gas, electric and other companies, and the basis for allocation.

Sincerely yours

s/ Harry Hanson

Enc.

NEW ENGLAND ELECTRIC SYSTEM and SUBSIDIARIES

Insurance Schedule - Year 1958

		Gas Companies	Electric Companies	Other Companies	Total	Basis of Allocation
1.	Contents of Motor Vehicles	$ 130	$ 535	$ 35	$ 700	A
2.	Destruction of Valuable Papers	79	600	120	799	B
3.	Automobile Physical Damage Insurance	402	2,760	390	3,552	C
4.	Comprehensive Crime	560	3,700	665	4,925	D
5.	Water Heater Warranty Bond	10,430	-	-	10,430	E
6.	Primary Liability Insurance					
	Workmen's Compensation)					B
	Personal Injury and Property Damage)	38,750	278,400	52,750	369,900	B
	Automobile Bodily Injury and)					
	Automobile Property Damage)					A
7.	Excess of primary	1,244	9,000	1,200	11,444	B
8.	Legal Liability Gas Explosion	38,450	-	-	38,450	F
9.	Boilers, Air Tanks, etc.	2,315	25,800	40	28,155	G
10.	Direct Damage Gas Explosion	649	-	-	649	H
11.	Extra Expense Insurance	5,730	-	-	5,730	I
12.	Fire Insurance, Extended Coverages and Vandalism, etc.	31,400	136,000	660	168,060	J
13.	Rents Insurance	233	1,580	-	1,813	I
14.	Sprinkler Leakage Insurance	50	1,020	-	1,070	J
15.	Group Life, A.D.&D. and A.&H.(Retention)	8,825	50,660	9,765	69,250	K
		$139,247	$510,055	$ 65,625	$714,927	

(A) Number of vehicles
(B) Payroll
(C) Valuation of vehicles
(D) Number of employees
(E) Number of water heaters installed
(F) Gross revenues
(G) Nature and amount of equipment
(H) Number of meters
(I) Company's determination of exposure and applicable rates
(J) Property valuations - actual exposure and applicable rates
(K) Gross premiums paid

1370

Res. Exhibit No.

NEW ENGLAND ELECTRIC SYSTEM

NEW ENGLAND ELECTRIC SYSTEM

GROSS INCOME OF AFFILIATED GAS COMPANIES

BEFORE AND AFTER SEVERANCE OF THE MASSACHUSETTS GAS BUSINESS

(ASSUMING INDEPENDENT OPERATION OF GAS COMPANIES)

TWELVE MONTHS ENDED DECEMBER 31, 1958

(1)	GROSS INCOME AFTER INCOME TAX AND BEFORE INTEREST AND DIVIDENDS			
	Before Severance	After Severance	Reduction	Per Cent
	$ (2)	$ (3)	$ (4)	% (5)
Central Massachusetts Gas Company	181,000	65,500	115,500	63.81
Lawrence Gas Company	377,000	250,900	126,100	33.45
Lynn Gas and Electric Company-Gas Department	424,800	213,500	211,300	49.74
Mystic Valley Gas Company	1,312,400	1,039,300	273,100	20.81
North Shore Gas Company	461,600	352,000	109,600	23.74
Northampton Gas Light Company	105,400	51,400	54,000	51.23
Norwood Gas Company	71,500	56,400	15,100	21.12
Wachusett Gas Company	113,200	60,300	52,900	46.73
Total Eight Gas Companies	3,046,900	2,089,300	957,600	31.43

( ) Indicates Red Figure

1371
RESPONDENTS' EXHIBIT NO. 93

Res. Ex. No. #93

NEW ENGLAND ELECTRIC SYSTEM

NET INCOME OF AFFILIATED GAS COMPANIES

BEFORE AND AFTER SEVERANCE OF THE MASSACHUSETTS GAS BUSINESS

(ASSUMING INDEPENDENT OPERATION OF GAS COMPANIES)

TWELVE MONTHS ENDED DECEMBER 31, 1958

	NET INCOME AVAILABLE FOR DIVIDENDS			
	Before Severance	After Severance	Reduction	Per Cent
(1)	$ (2)	$ (3)	$ (4)	% (5)
Central Massachusetts Gas Company	143,100	27,600	115,500	80.71
Lawrence Gas Company	237,200	111,100	126,100	53.16
Lynn Gas and Electric Company-Gas Department	344.900	133,600	211,300	61.26
Mystic Valley Gas Company	847,000	573,900	273,100	32.24
North Shore Gas Company	274,700	165,100	109,600	39.90
Northampton Gas Light Company	79,200	25,200	54,000	68.18
Norwood Gas Company	45,700	30,600	15,100	33.04
Wachusett Gas Company	86,500	33,600	52,900	61.16
Total Eight Gas Companies	2,058,300	1,100,700	957,600	46.52

1372
RESPONDENTS' EXHIBIT NO. 94

Res. Ex. No. #94

RESPONDENTS' EXHIBIT NO. 104

Res. Ex. 104

NEW ENGLAND ELECTRIC SYSTEM

441 STUART STREET
BOSTON 16, MASSACHUSETTS

HARRY HANSON
VICE PRESIDENT AND TREASURER

June 21, 1960

Mr. Francis H. Spencer
Division of Corporate Regulation
Securities and Exchange Commission
Washington 25, D. C.

Dear Mr. Spencer:

Re: File No. 59-102

Pursuant to the request of Mr. Leon Ware, we are submitting herewith schedules showing a breakdown of amounts in the Ebasco studies of the changes in costs of the eight Massachusetts gas companies of NEES resulting from severance, together with an estimated distribution of increases in operating expenses by major accounting classifications. In view of the fact that no estimate has been made of the allocation of charges of the "Central Organization" under combined operation among the eight companies, totals only have been included for combined operation.

In addition, since some of the increases in operating expenses are considered allocable to production, and since production expenses and purchased gas were excluded from the summary tabulation of 1958 operating expenses of Massachusetts gas companies which was submitted as Respondent's Exhibit 90, it would appear that the column entitled "Total-Pro Forma" of that exhibit should be revised to exclude the amount allocable to production. A revised summary tabulation is enclosed.

We are sending you herewith four copies of each of the above-mentioned schedules.

Sincerely yours

s/ Harry Hanson

Enclosures

EIGHT MASSACHUSETTS GAS COMPANIES

SUMMARY OF NET EFFECT OF SEVERANCE UPON INCOME ACCOUNTS

	Other Operating Revenue	Operating Revenue Deductions: Operating Expenses (See Attached)	Depreciation	Taxes	Total Operating Revenue Deductions	Nonoperating Income	Total Adjustment of Gross Income Before F.I.T.
Independent Operation							
Central Massachusetts Gas Company	$ (800)	$ 97,400	$ 2,500	$ 1,000	$ 100,000	$ (800)	$ 102,500
Lawrence Gas Company	(1,200)	195,300	3,500	2,800	201,600	(6,800)	209,600
Lynn Gas Department	2,100	336,500	5,200	26,000	367,700	(1,700)	367,300
Mystic Valley Gas Company	(3,000)	396,100	7,000	4,600	407,700	1,000	409,700
North Shore Gas Company	(18,500)	157,100	2,000	1,800	160,900	4,800	174,600
Northampton Gas Light Company	(23,400)	76,500	1,500	800	78,800	(700)	102,900
Norwood Gas Company	-	30,100	500	300	30,900	1,000	29,900
Wachusett Gas Company	-	96,800	3,000	1,400	101,200	2,700	98,500
Total - Independent Operation	(44,800)	1,385,800	25,200	38,700	1,449,700	(500)	1,495,000
Combined Operation	$(38,000)	$1,065,500	$25,200	$36,400	$1,127,100	$ (500)	$1,165,600

( ) Denotes Decrease

6/20/60

Res. Exhibit No. 104

EIGHT MASSACHUSETTS GAS COMPANIES

ESTIMATED DISTRIBUTION OF INCREASES IN OPERATING EXPENSES RESULTING FROM SEVERANCE

Independent Operation	Production	Distribution	Utilization	Commercial	New Business	General and Administrative	Total
Central Massachusetts Gas Company	$ 2,500	$11,200	$ 800	$ 11,100	$ (900)	$ 72,700	$ 97,400
Lawrence Gas Company	6,100	20,500	2,200	12,600	13,000	140,900	195,300
Lynn Gas Department	6,300	25,500	25,200	125,700	17,100	136,700	336,500
Mystic Valley Gas Company	15,700	39,000	4,900	109,300	10,700	216,500	396,100
North Shore Gas Company	9,600	31,600	5,400	25,100	8,200	77,200	157,100
Northampton Gas Light Company	1,700	9,200	3,000	25,600	(800)	37,800	76,500
Norwood Gas Company	(400)	(900)	(200)	300	(400)	31,700	30,100
Wachusett Gas Company	3,100	10,400	1,700	14,100	(800)	68,300	96,800
Total - Independent Operation	44,600	146,500	43,000	323,800	46,100	781,800	1,385,800
Combined Operation	$22,500	$ 78,700	$41,200	$323,500	$(2,200)	$601,800	$1,065,500

( ) Denotes Decrease

5/20/60

Res. Exhibit No. 104

MASSACHUSETTS GAS COMPANIES
1958 OPERATING EXPENSES PER CUSTOMER
(EXCLUDING PRODUCTION AND PURCHASED GAS)

Company	Customers 12/31/58	Transmission and Distribution Amount	Transmission and Distribution Per Cust.	Utilization(a) Amount	Utilization(a) Per Cust.	Commercial Amount	Commercial Per Cust.	New Business Amount	New Business Per Cust.	Pensions and Welfare Amount	Pensions and Welfare Per Cust.	Administrative and General Total	Administrative and General Less: Depreciation	Less: Pensions and Welfare	Less: Balance	Administrative and General Per Cust.	Total-Actual Amount	Total-Actual Per Cust.	Total-Pro Forma(b) Amount	Total-Pro Forma(b) Per Cust.
New England Electric System Mass. Gas Companies:																				
Central Mass. Gas	9,595	$ 72,413	$ 7.55	$ 39,691	$4.[illegible]	$ 57,977	$6.04	$ 61,102	$6.37	$ 31,422	$3.27	$ 147,187	$ 52,000	$ 31,422	$ 63,765	$ 6.65	$ 326,370	$34.02	$ 421,270	$43.91
Lawrence Gas	32,801	212,882	6.49	107,878	3.29	124,791	3.80	211,570	6.45	95,425	2.91	408,608	150,000	95,425	163,183	4.97	915,729	27.91	1,104,929	33.69
Lynn (Gas Dept.)	40,922	274,064	6.70	85,990	2.10	190,218	4.65	150,497	3.68	134,805	3.29	519,347	171,357	134,805	213,185	5.21	1,048,759	25.63	1,378,959	33.70
Mystic Valley Gas	98,773	677,680	6.86	414,899	4.20	479,941	4.86	517,692	5.24	276,683	2.80	1,230,030	450,000	276,683	503,347	5.10	2,870,242	29.06	3,250,642	32.91
Northampton Gas	8,023	61,124	7.62	30,237	3.77	28,699	3.58	39,643	4.94	27,801	3.47	147,664	40,000	27,801	79,863	9.95	267,367	33.33	342,167	42.65
North Shore Gas	33,113	179,262	5.41	72,820	2.20	158,246	4.78	191,644	5.79	128,968	3.89	529,565	212,000	128,968	188,597	5.70	919,537	27.77	1,067,037	32.22
Norwood Gas	4,490	26,695	5.95	17,892	3.98	25,556	5.69	27,413	6.11	11,256	2.51	87,342	27,000	11,256	49,086	10.93	157,898	35.17	188,398	41.96
Wachusett Gas	8,048	65,336	8.12	25,401	3.16	41,066	5.10	45,939	5.71	18,006	2.24	117,189	36,000	18,006	61,183	7.60	256,931	31.93	350,631	43.57
NEES Mass. Gas Companies Average	235,765	1,569,456	6.66	794,808	3.37	1,106,494	4.69	1,245,500	5.28	724,366	3.07	3,186,932	1,140,357	724,366	1,322,209	5.61	6,762,833	28.68	8,104,033	34.37
Other Non-affiliated Mass. Gas Cos. with over 5,000 Meters:																				
Berkshire Gas	24,963	150,219	6.02	104,368	4.18	179,678	7.20	108,147	4.34	61,147	2.45	407,017	132,132	61,147	213,738	8.56	817,497	32.75		
Boston Gas	305,248	3,549,901	11.63	1,741,223	5.70	2,071,660	6.79	1,306,796	4.28	852,000	2.79	3,639,937	1,263,700	852,000	1,524,237	4.99	11,045,817	36.18		
Brockton-Taunton Gas.	54,955	447,739	8.62	215,460	4.15	363,049	6.99	231,829	4.46	91,883	1.77	752,138	214,331	91,883	445,924	8.58	1,795,884	34.57		
Buzzards Bay Gas	5,454	75,095	13.77	37,819	6.93	58,349	10.70	114,134	20.93	6,216	1.14	163,090	43,718	6,216	113,156	20.75	404,769	74.22		
Cambridge Gas	49,653	290,296	5.85	257,054	5.18	284,674	5.73	365,908	7.37	183,825	3.70	634,977	163,124	183,825	288,028	5.80	1,669,785	33.63		
Fall River Gas	34,576	181,404	5.25	102,318	2.96	143,605	4.15	435,241	12.59	99,391	2.87	511,793	158,748	99,391	253,654	7.34	1,215,613	35.16		
Fitchburg (Gas Dept.)	10,967	88,882	8.10	31,894	2.91	49,000	4.47	44,679	4.07	23,900	2.18	162,507	46,018	23,900	92,588	8.44	330,943	30.17		
Haverhill Gas	19,786	204,669	10.34	91,429	4.62	130,361	6.59	106,632	5.39	75,860	3.83	392,067	96,000	75,860	220,207	11.13	829,158	41.90		
Lowell Gas	29,206	124,489	4.26	103,571	3.55	192,110	6.58	250,165	8.57	50,687	1.74	490,834	172,701	50,687	268,446	9.19	989,468	33.89		
New Bedford (Gas Dept.)	43,173	353,525	8.19	115,333	2.67	146,685	3.40	203,050	4.70	143,289	3.32	521,276	177,738	143,289	200,251	4.64	1,162,133	26.92		
Springfield Gas	66,179	503,966	7.62	459,535	6.94	428,423	6.47	441,206	6.67	163,650	2.47	1,049,902	290,000	163,650	596,252	9.01	2,593,052	39.18		
Worcester Gas	77,940	1,173,322	15.05	447,523	5.74	536,588	6.88	775,595	9.95	356,196	4.57	1,443,519	492,129	356,196	595,194	7.64	3,884,418	49.83		
Other Companies Average	719,100	7,143,527	9.93	3,707,527	5.16	4,584,182	6.37	4,383,582	6.10	2,108,044	2.93	10,169,059	3,249,340	2,108,044	4,811,675	6.69	26,738,537	37.18		
Average of all above Mass. Gas Companies	954,865	$8,712,983	$9.12	$4,502,335	$4.72	$5,690,676	$5.96	$5,629,082	$5.90	$2,832,410	$2.97	$13,395,991	$4,389,697	$2,832,410	$5,133,884	$5.42	$33,501,370	$35.09		

(a) Not including Amortization of Conversion Costs as extent and timing of conversion to high BTU gas is not consistent.

(b) Figures in these columns are actual expenses plus additional estimated expenses if NEES gas companies were independently operated.

REVISED 6-20-60

1276

Res. Exhibit No. 104

RESPONDENTS' EXHIBIT NO. 104A

DATA* SUPPLEMENTAL TO RESPONDENT'S EX. 90

MASSACHUSETTS GAS COMPANIES 1958 OPERATING EXPENSES PER CUSTOMER

(EXCLUDING PRODUCTION AND PURCHASED GAS)

Pro Forma, assuming combined operation of the gas companies after severance.

	Amount	*Per Customer*
Transmission and Distribution	$1,648,156	$ 6.99
Utilization [a]	836,008	3.55
Commercial	1,429,994	6.06
New Business	1,243,300	5.27
Admin. and General, less depreciation but including Pensions & Welfare	2,648,375	11.24
Total — pro forma	$7,805,833	$33.11

[a] Not including Amortization of Conversion Cost.

* Supplied to the Staff by Harry Hanson, Treasurer of NEES, via telephone.

RESPONDENTS' EXHIBIT NO. 105

Res. Exhibit No. 105
(14 Pages)

INCREASES IN COSTS UNDER COMBINED OPERATION

The following analysis sets forth in summary form, the effect of combined operation (separate from the NEES System) versus System operation in the year 1958, or the net effect of severance as a group upon the operations of the eight System gas companies.

Under Executive, Administrative and Staff, the Pro Forma Payroll has been taken from the Supplemental Report (Exhibit 91), while the actual figures shown are derived from the Gas Severance Study - Volume I (Exhibit 58-A).

Under the various other sections, the increases in cost have been summarized from the Gas Severance Study (pages 136, 237, 348, 447, 537, 631, 725 and 831), except where changes in operations have been contemplated under combined operation versus independent operation. Each change is explained in a note or by a Supplementary Schedule detailing the basis of the change, using as a source the Pro Forma figures in the Supplemental Report and Actual figures in the Gas Severance Study.

Executive, Administrative and Staff

	Payroll	Expense Reimbursement	Payroll Taxes and Fringe Benefits	Billing for Services	Total
Pro Forma (combined operation)					
Central Organization	$574,300	$35,000			$609,300
Local Organizations:					
Central Mass. Gas	31,100				31,100
Lawrence Gas	43,800				43,800
Lynn Gas	58,800				58,800
Mystic Valley Gas	61,600				61,600
North Shore Gas	60,300				60,300
Northampton Gas	37,300				37,300
Norwood Gas	32,600				32,600
Wachusett Gas	31,000				31,000
	930,800	35,000			965,800
Adjustment to reduce salaries to average 1958 levels	(44,400)				(44,400)
	886,400	35,000			921,400
Actual (System operation)	(529,900)	(16,000)			(545,900)
NEPSCO				($235,300)	(235,300)
Billed by Worcester				(5,500)	(5,500)
Sub-Total	356,500	19,000		(240,800)	134,700
Payroll taxes and fringe benefits on increased payroll			$53,500		53,500
	$356,500	$19,000	$53,500	($240,800)	$188,200

( ) Indicates red figure

The total increase in Executive, Administrative and Staff costs which would result from combined operation would affect the accounts of the eight gas companies as follows:

Operating Expenses	$200,400
Payroll Taxes	5,500
Sub-Total	205,900
Clearing Accounts	(12,600)
Other Accounts	(5,100)
	$188,200

(1) From pages 124, 225, 332-3, 432, 526, 622, 719 and 821 of Exhibit 58A.

Production, Distribution, Utilization and Garage

	Other Operating Revenues	Operating Expenses	Payroll Taxes	Total
Central Mass. Gas		($ 200)		($ 200)
Lawrence Gas		4,000		4,000
Lynn Gas		27,800	$ 600	28,400
Mystic Valley Gas (1)		(1,100)	400	(700)
North Shore Gas	($1,800)	6,700		8,500
Northampton Gas		5,600	100	5,700
Norwood Gas		(600)		(600)
Wachusett Gas		100		100
Total	($1,800)	$42,300	$1,100	$45,200

(1) Excludes Utilization Engineer on page 447 of Exhibit 58.

New Business

	Operating Expenses	Payroll Taxes	Nonoperating Income(1)	Total
Central Mass. Gas			($ 800)	$ 800
Lawrence Gas			(6,800)	6,800
Lynn Gas (2)	($13,500)	($200)	(1,700)	(12,000)
Mystic Valley Gas	4,700	100	1,000	3,800
North Shore Gas			4,800	(4,800)
Northampton Gas			(700)	700
Norwood Gas			1,000	(1,000)
Wachusett Gas			2,700	(2,700)
Total	($ 8,800)	($100)	($ 500)	($8,400)

(1) Included under Merchandising
(2) As per Supplementary Schedule No. 1

General Accounting

	Operating Expenses	Payroll Taxes	Total
Central Mass. Gas (1)	($1,100)	($200)	($ 1,300)
Lawrence Gas (1)	6,600	100	6,700
Lynn Gas	5,000		5,000
Mystic Valley Gas	8,000	100	8,100
North Shore Gas (1)	5,800	100	5,900
Northampton Gas (1)	(400)	(100)	(500)
Norwood Gas (1)	(2,200)	-	(2,200)
Wachusett Gas (1)	(4,300)	200	(4,100)
	$17,400	$200	$17,600

(1) As per Supplementary Schedule No. 2

Customer Accounting

	Operating Expenses	Payroll Taxes	Total
Central Mass. Gas	$ 18,000	$ 600	$ 18,600
Lawrence Gas	26,800	300	27,100
Lynn Gas	134,000	1,700	135,700
Mystic Valley Gas	133,000	1,800	134,800
North Shore Gas	45,900	700	46,600
Northampton Gas	31,000	400	31,400
Norwood Gas	-	-	-
Wachusett Gas	20,900	500	21,400
	$409,600	$6,000	$415,600

Machine Accounting

	Operating Expenses	Payroll Taxes	Total
Mystic Valley Gas	$13,400	$100	$13,500

Stores

	Operating Expense	Payroll Taxes	Total
Central Mass. Gas (1)	$ 800		$ 800
Lawrence Gas (1)	4,700	$ 200	4,900
Lynn Gas (1)	300	200	500
Mystic Valley Gas	-	-	-
North Shore Gas (1)	3,000	(100)	2,900
Northampton Gas (1)	200	-	200
Norwood Gas	-	-	-
Wachusett Gas (1)	200	-	200
Total	$9,200	$ 300	$9,500

(1) As per Supplementary Schedule No. 3

Miscellaneous Services

	Operating Expense	Payroll Taxes	Total
Lynn Gas	$15,700	$200	$15,900

Facilities (1)

	Other Operating Revenue	Operating Expenses	Property Taxes	Depreciation	Total
Central Organization	-	$37,000	-	-	$37,000
Central Mass. Gas	$ 1,000	10,900	-	-	9,900
Lawrence Gas	1,800	22,100	$ 1,000	$ 500	21,800
Lynn Gas	2,100	14,000	22,000	2,700	36,600
Mystic Valley Gas		(19,700)	-	-	(19,700)
North Shore Gas	(14,700)	(5,900)	-	-	8,800
Northampton Gas	(23,300)	-	-	-	23,300
Norwood Gas	-	-	-	-	-
Wachusett Gas	-	6,500	-	-	6,500
	($33,100)	$64,900	$23,000	$3,200	$124,200

(1) As per Supplementary Schedule No. 4

Insurance (1)

	Pro Forma (2)	Actual	Increase (3)
Total	$293,700	$139,300	$154,400

(1) As per Exhibit 91
(2) Not allocated between companies
(3) Operating Expense

Transportation

	Operating Expenses	Total (1)
Mystic Valley Gas	($2,500)	($2,500)

(1) As per Supplementary Schedule No. 5

Professional Services

	Pro Forma	Actual	Increase(1)
Independent Audit			
Central Mass. Gas	$ 2,500	$ 1,600	$ 900
Lawrence Gas	2,500	1,600	900
Lynn Gas	2,800	1,400	1,400
Mystic Valley Gas	2,300	1,600	700
North Shore Gas	2,900	2,300	600
Northampton Gas	2,500	1,600	900
Norwood Gas	1,700	1,000	700
Wachusett Gas	2,500	1,600	900
Central Organization	3,000	-	3,000
Outside Legal Services	10,000	-	10,000 (2)
Total	$32,700	$12,700	$20,000

(1) Operating Expense
(2) Indicates Additional Cost

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Miscellaneous

	Other Operating Revenue	Operating Expense	Payroll Taxes	Depreciation	Total
Central Organization(1)		$25,300	$100		$ 25,400
Local Organizations:					
Central Mass. Gas		1,500		$ 2,500	4,000
Lawrence Gas		10,000		3,000	13,000
Lynn Gas		12,500		2,500	15,000
Mystic Valley Gas	($3,000)	32,900		7,000	42,900
North Shore Gas		(8,400)		2,000	(6,400)
Northampton Gas	(100)	300		1,500	1,900
Norwood Gas		800		500	1,300
Wachusett Gas		1,200		3,000	4,200
Total	($3,100)	$76,100	$100	$22,000	$101,300

(1) As per Supplementary Schedule No. 6

NEW ENGLAND ELECTRIC SYSTEM

Summary of the Net Effect on the Income Accounts of the Eight Gas Companies Which Would Arise From Changes in Costs Through Severance As A Group From the NEES System

	Other Operating Revenue	Operating Expenses	Depreciation	Taxes	Nonoperating Income	Total
Executive, Administrative and Staff		$200,400		$ 5,500		$ 205,900
Production, Distribution, Utilization and Garage	($ 1,800)	42,300		1,100		45,200
New Business		(8,800)		(100)	($500)	(8,400)
General Accounting		17,400		200		17,600
Customer Accounting		409,600		6,000		415,600
Machine Accounting		13,400		100		13,500
Stores		9,200		300		9,500
Miscellaneous Services		15,700		200		15,900
Facilities	(33,100)	64,900	$ 3,200	23,000		124,200
Insurance		154,400				154,400
Transportation		(2,500)				(2,500)
Professional Services		20,000				20,000
Miscellaneous	(3,100)	76,100	22,000	100		101,300
Sub-Total	(38,000)	1,012,100	25,200	36,400	(500)	1,112,200
Distribution of Clearing Accounts		53,400				53,400
	($38,000)	$1,065,500	$25,200	$36,400	($500)	$1,165,600

( ) Indicates red figure

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( ) Indicates red figure

New Business

Supplementary Schedule No. 1

	Pro Forma Payroll	Adjustment to Average 1958 Levels	Payroll Taxes and Fringe Benefits	Total Pro Forma	Total Actual	Increase
Lynn	$87,600	($4,200)	$12,500	$95,900	$110,200	($14,300)

The effect upon the accounts of Lynn Gas would be as follows:

Operating Expenses	($ 13,500)
Merchandising subsequently accounted for (p. 338-Vol. I)	(600)
Payroll Taxes	(200)
	($ 14,300)

General Accounting

Supplementary Schedule No. 2

	Pro Forma Payroll	Adjustment to Average 1958 Levels	Payroll Taxes and Fringe Benefits	Total Pro Forma	Total Actual	Increase
Central Mass. Gas	$16,700	($ 800)	$2,400	$18,300	$19,600	($1,300)
Lawrence Gas	33,600	(1,600)	4,800	36,800	30,100	6,700
North Shore Gas	32,800	(1,600)	4,700	35,900	30,000	5,900
Northampton Gas	20,000	(1,000)	2,800	21,800	22,300	(500)
Norwood Gas	10,500	(500)	1,500	11,500	13,700	(2,200)
Wachusett Gas	16,700	(800)	2,400	18,300	22,400	(4,100)

The effect upon the accounts of these companies would be as follows:

	Operating Expenses	Payroll Taxes	Total
Central Mass. Gas	($1,100)	($200)	($1,300)
Lawrence Gas	6,600	100	6,700
North Shore Gas	5,800	100	5,900
Northampton Gas	(400)	(100)	(500)
Norwood Gas	(2,200)	-	(2,200)
Wachusett Gas	(4,300)	200	(4,100)

Stores

Supplementary Schedule No. 3

	Pro Forma Payroll	Adjustment to Average 1958 Levels	Payroll Taxes and Fringe Benefits	Total Pro Forma	Total Actual	Increase
Central Mass. Gas	$10,200	($ 500)	$1,500	$11,200	$ 8,800	$ 2,400
Lawrence Gas	24,700	(1,200)	3,500	27,000	10,000	17,000
Lynn Gas	22,300	(1,100)	3,200	24,400	12,100	12,300
North Shore Gas	25,400	(1,300)	3,600	27,700	27,700	-
Northampton Gas	9,900	(500)	1,400	10,800	9,100	1,700
Wachusett Gas	10,200	(500)	1,500	11,200	8,300	2,900

The effect upon the accounts of these companies would be as follows:

	Operating Expense	Payroll Taxes	Stores Clearing	Total
Central Mass. Gas	$ 800		$ 1,600	$ 2,400
Lawrence Gas	4,700	$ 200	12,100	17,000
Lynn Gas	300	200	11,800	12,300
North Shore Gas	3,000	(100)	(2,900)	-
Northampton Gas	200	-	1,500	1,700
Wachusett Gas	200	-	2,700	2,900

Facilities

Supplementary Schedule No. 4

	Pro Forma Rental Cost(1)	Pro Forma Rental Income	Total Pro Forma	Actual Costs of Rentals	Actual Rental Income	Total Actual	Increase
Central Organization	$37,000	-	$37,000				$37,000
Local Organizations:							
Central Mass. Gas	23,900	$1,800	22,100	$ 9,200	$ 800	$ 8,400	13,700
Lawrence Gas	61,300	3,000	58,300	37,100	1,200	35,900	22,400
Lynn Gas	40,600	2,100	38,500	-	-	-	38,500
Mystic Valley Gas	75,200	-	75,200	85,800	-	85,800	(10,600)
North Shore Gas	7,300	(2,900)	10,200	13,200	11,800	1,400	8,800
Northampton Gas	-	3,000	(3,000)	-	26,300	(26,300)	23,300
Norwood Gas	-	-	-	-	-	-	-
Wachusett Gas	19,600	-	19,600	7,000	-	7,000	12,600

The effect upon the accounts of these companies would be as follows:

	Other Operating Income	Operating Expense	Stores Clearing	Transportation Clearing	Property Taxes	Depreciation	Total(2)
Central Organization	-	$37,000	-	-	-	-	$37,000
Local Organizations:							
Central Mass. Gas	$ 1,000	10,900	$5,700	($1,900)	-	-	13,700
Lawrence Gas	1,800	22,100	7,200	(6,600)	$ 1,000	$ 500	22,400
Lynn Gas	2,100	14,000	1,900	-	22,000	2,700	38,500
Mystic Valley Gas	-	(19,700)	-	9,100			(10,600)
North Shore Gas	(14,700)	(5,900)	-	-	-	-	8,800
Northampton Gas	(23,300)	-	-	-	-	-	23,300
Norwood Gas	-	-	-	-	-	-	-
Wachusett Gas	-	6,500	6,100	-	-	-	12,600

(1) Reflecting reduction in space requirements for the "Local Organizations".

(2) Exclusive of amounts charged to merchandising.

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Transportation

Supplementary Schedule No. 5

	Operating Expense	Transportation Clearing	Total
Pro Forma			
Central Organization (7 vehicles)		$10,500	$10,500
Central Mass. Gas (2 vehicles)		3,000	3,000
Central Mass. Gas (Servicing)		4,000	4,000
Lawrence Gas (Major Repairs)		5,000	5,000
Lynn Gas (3 vehicles)		4,500	4,500
Mystic Valley Gas (3 vehicles)		5,000	5,000
North Shore Gas (1 vehicle)		1,500	1,500
Northampton Gas (1 vehicle)		1,500	1,500
Northampton Gas (Servicing)		3,000	3,000
Norwood Gas		-	-
Wachusett Gas		-	-
Actual (Billing)			
Central - From Worcester		(3,600)	(3,600)
Mystic - From Suburban	(4,800)		(4,800)
- To Suburban	2,300		2,300
Total	($2,500)	$34,400	$31,900

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Miscellaneous

Supplementary Schedule No. 6

	Operating Expense	Payroll Taxes	Other Accounts	Total
Holder and gas plant maintenance services	$10,000		$5,000	$15,000
Student Engineering	6,900	$100		7,000
Monthly Employee Magazine	4,000			4,000
Safety Materials and Supplies	1,500			1,500
Air Conditioning	2,400			2,400
Service School	500			500
Total	$25,300	$100	$5,000	$30,400 (1)

(1) Exclusive of net decrease in transportation costs shown on Supplementary Schedule No. 5

RESPONDENTS' EXHIBIT NO. 106

[Letterhead — NEW ENGLAND ELECTRIC SYSTEM]

December 7, 1960

Mr. Samuel Gishman
Assistant Chief Financial Analyst
Branch of Public Utility Regulation
Securities and Exchange Commission
Washington 25, D. C.

Dear Mr. Gishman:

This is in answer to your telephone inquiry concerning reconciliation of the $1,300 increase in "Executive, Administrative and Staff" payroll and expenses (shown on page 719 of Exhibit 58 A), which would result from independent versus system operation of Norwood Gas Company, to the accounting effect of such increase for the year 1958 as shown on page 720 of Exhibit 58 A.

In 1958, Norwood built a liquid propane plant and Norwood's 1958 actual payroll costs (see page 709 and second paragraph on page 719) included $6,800 for payroll plus $1,600 related fringe benefits and expense reimbursement, an aggregate of $8,400, for the engineering services of the Malden Gas Division which were charged to plant. Under independent operation, the Executive, Administrative and Staff payroll and expense for 1958 (see page 718 and first paragraph on page 719) would have been all chargeable to expense, except for $1,900 which is considered to be the normal administrative payroll charged to construction. Other engineering services, such as was necessary in 1958 in connection with the liquid propane plant installation, would have been obtained from an outside source and charged to plant. Moreover, an additional $1,200 of Norwood's actual payroll was charged to other than expense accounts, i.e., $1,000 to merchandising (see top of page 721 re merchandising) and $200 to clearing accounts which,

it has been assumed, would have been charged to expense under independent operation. Therefore, the $8,400 applicable to the engineering services of the Malden Gas Division plus (a) $1,200 of Norwood's 1958 payroll charged to other accounts, (b) $6,800 estimated increase in payroll resulting from independent operation, (c) $500 increase in annual expense reimbursement and (d) $800 increase in payroll fringe benefits total $17,700 from which was deducted the actual NEPSCO billings of $7,000 charged to expense in 1958 to arrive at the $10,700 increase in operating expenses as shown on page 720.

I hope this explains the situation to you. If not, please phone and we'll try again.

Sincerely yours

(s) HARRY HANSON

RESPONDENTS' EXHIBIT NO. 107

RES. #107

NEW ENGLAND ELECTRIC SYSTEM
Gas Subsidiaries

Insurance Coverages in Effect (Except Group Annuity) - Annual Cost Per Policy Billings

Type of Insurance		Amounts or Limits of Liability	1954	1955	1956	1957	1958	1959
All Risks Insurance								
Contents of Motor Vehicles		$100,000	$ 95	$ 150	$ 150	$ 150	$ 130	$ 130
Destruction of Valuable Papers		300,000	70	70	70	79	79	79
Automobile Physical Damage	(1)	183,200	230	230	250	250	402	425
Bonds								
Comprehensive Crime								
Fidelity		300,000)						
Money and Securities		100,000)	540	540	520	520	560	800
Forgery		100,000)						
Collection Agents		10,000)						
Open Stock		100,000)						
Water Heater Warranty Bond		Various	No Coverage	27,300	12,600	12,700	10,430	8,860
Casualty Insurance								
Workmen's Compensation		Statutory						
Personal Injury	one person -	100,000)	23,700	15,500	19,800	21,900	15,900	18,900
	one accident-	1,000,000)						
Property Damage	per accident-	2,000,000)	11,500	7,600	19,700	20,100	12,000	10,200
	deductible -	1,000)						
Automobile Bodily Injury	one person -	200,000)						
	two or more -	1,000,000)	15,500	10,200	11,300	10,900	10,850	13,000
Automobile Property Damage	per accident-	50,000)						
Excess of Primary (Umbrella excluding gas explosion property damage)								
Legal Liability Gas Explosion	(2)	2,000,000	No. Cov.	No. Cov.	800	630	1,244	1,320
	(3)	2,500,000	25,600	34,300	37,800	39,200	38,450	38,450
Fire Insurance								
Boilers, Air Tanks, etc.		1,250,000	1,500	1,500	1,500	1,650	2,315	2,315
Direct Damage Gas Explosion (Damage to Company Distribution System)		100,000	640	640	640	640	649	649
Fire Expense Insurance	(4)	848,000	2,340	2,340	3,700	2,900	5,730	5,730
Fire Insurance, Extended Coverages Vandalism & Malicious Mischief	(5)	14,348,000	30,200	23,300	23,200	24,500	31,400	36,300
Flood Insurance		129,600	No. Cov.	No. Cov.	No. Cov.	250	233	233
Boiler Leakage Insurance		23,250	50	50	50	50	50	50
Group Life, A.D.&D. and A.&H.	(6)	-	6,600	5,700	5,800	6,700	8,825	9,990
Total	(7)		$118,565	$129,420	$137,880	$143,119	$139,247	$147,431

(1) Amount of insurance increased to $ 329,600 in 1958
(2) Limit of insurance increased to 4,000,000 in 1958
(3) Limit of insurance increased to 6,000,000 in 1958
(4) Limit of insurance increased to 1,613,000 in 1958
(5) Amount of insurance increased to 22,735,470 in 1958
(6) Cost indicated is Insurance Company retention
(7) Totals for years 1954 through 1957 do not include Gas Dept. of Lynn Gas & Electric Co.

New England Electric System

Gas Subsidiaries

Summary of Insurance Changes Affecting Account 671

For Years 1954 Through 1959

	1954	1955	1956	1957	1958	1959
Cost of System Gas Company Coverages	$118,565	$129,420	$137,880	$143,119	$139,247	$147,431
Deduct						
Automobile Physical Damage	230	230	250	250	402	425
Water Heater Warranty Bond	No Coverage	27,300	12,600	12,700	10,430	8,860
Automobile Bodily Injury and Prop. Damage	15,500	10,200	11,300	10,900	10,850	13,000
Group Life, A.D.&D. and A.H.	6,600	5,700	5,800	6,700	8,825	9,990
Total Deductions	22,330	43,430	29,950	30,550	30,507	32,275
Balance charged principally to Account 671	96,235	85,990	107,930	112,569	108,740	115,156
Deduct Gas Dept. of Lynn Gas and Electric Co.	—	—	—	—	25,142	22,048
Total - 7 Companies, excluding "Lynn"	$96,235	$85,990	$107,930	$112,569	$83,598	$93,108

1590

RESPONDENTS' EXHIBIT NO. 108

NEW ENGLAND ELECTRIC SYSTEM
FIVE ELECTRIC COMPANIES
COMMERCIAL COSTS PER CUSTOMER — 1958

	Customers At December 31, 1958	*Commercial Cost*[1]	*Per Customer*
Lynn Electric Company	45,378	$304,827	$6.71
Merrimack-Essex Electric Company	164,836	746,291	4.53
Northampton Electric Lighting Company	9,512	36,415	3.83
Suburban Electric Company	80,302	336,352	4.19
Worcester County Electric Company	203,576	976,797	4.80

[1] Per 1958 Returns to the Massachusetts Department of Public Utilities.

RESPONDENTS' EXHIBIT NO. 109

DISTRIBUTION OF CLEARING ACCOUNTS BETWEEN OPERATING EXPENSE ACCOUNTS AND PLANT & OTHER ACCOUNTS UNDER COMBINED OPERATION (EXHIBIT 91)

Set forth on the attached tabulation is a summary of the sources of increases and decreases in charges to clearing accounts and the distribution thereof to operating expense accounts in the net amount of $53,400 (Exhibit 91, page 40 and Exhibit 105, page 8) and to plant and other accounts in the net amount of $28,100.

The changes in clearing account charges as shown on this tabulation are listed in accordance with the functional classifications used throughout Exhibits 58A and 91. In the Executive and Administrative category there is indicated a reduction of $3,100 in Stores Clearing caused by eliminating NEPSCO billings to the individual gas compa-

nies which those companies had charged to Stores Clearing and which are shown in the E & A section of each company in Exhibit 58A. Also in this category is a reduction of $2,100 in Transportation Clearing brought about by the elimination of the part time Garage Mechanic and Transportation Supervisor who was included in the actual E & A category of Northampton Gas Light Company (Exhibit 58A, page 610) and whose salary had been charged to Transportation Clearing. The final reduction in this category is $7,400 in Other Clearing which is made up of $1,700 in NEPSCO billings and $5,700 of Gas Division charges. This $5,700 is made up of (a) $2,100 charged to intercompany billing clearing for services to the gas department of The Narragansett Electric Company (since such services would not be performed if the gas companies were separated from NEES, no such charge is made in the pro forma figures) and (b) an estimated $3,600 representing curtailment of other actual activities charged to clearing accounts (chiefly preliminary survey and investigation) on account of the integration of the Lynn Gas department into the organization and the elimination of joint engineering services by the Lynn Gas and Electric Company, with resulting increased demands upon the Central Organization engineering staff.

The next category on the tabulation is Production, Distribution, Utilization and Garage which has a net increase of $6,000 to Transportation Clearing made up of the following:

$5,500 net increase at Lynn due to a payroll increase for garage personnel in the pro forma combined operation (Exhibit 91, page 20) as compared with actual payroll for garage personnel and supervision (Exhibit 58A, page 335) adjusted to 1958 wage levels;

$3,800 net reduction at Mystic Valley due to elimination of Suburban billing for garage services and the

substitution therefor of personnel, whose direct payroll charges only would be charged to transportation clearing, to perform these services for Mystic Valley (Exhibit 91, page 24 and Exhibit 58A, page 435);

$4,300 net increase at North Shore due to elimination of billing by North Shore to Merrimack-Essex for garage services at North Shore's Beverly garage. Of the $5,000 billed in 1958, $700 was for payroll taxes and fringe benefits which do not affect clearing accounts leaving a $4,300 increase to Transportation Clearing.

The next category is General Accounting at Lynn in which there was a net reduction of $1,900 in charges to Stores Clearing brought about by shifting of functions of certain Works Accounting personnel to General Accounting and to Stores Accounting to be consistent with functional categories established throughout Exhibits 58A and 91. That part of Works Accounting payroll which had been charged to Stores Clearing ($1,900) has been deducted from Stores Clearing as shown on the tabulation and the functions have been provided for in the Stores Accounting group. The detail of the above is found in Exhibit 58A, pages 340, 341, 343 and 344.

In the Stores category the net increase of $26,800 in charges to Stores Clearing is shown in detail by companies affected on the Supplementary Schedule No. 3 of Exhibit 105 which is based on the detailed payroll analysis for each company in Exhibits 58A and 91.

The changes in Stores Clearing and Transportation Clearing in the Facilities category are based on the net changes in charges to these clearing accounts brought about by the increases or decreases in rental costs of storeroom and garage space chargeable to Stores and Transportation Clearing accounts. The detail of these changes by affected

companies is shown on Supplementary Schedule No. 4 of Exhibit 105.

In the Transportation category the net increase in Transportation Clearing is $34,400 which is detailed in Supplementary Schedule No. 5 of Exhibit 105 by companies affected. This Schedule also shows whether the increase in Transportation Clearing is due to increased number of vehicles or replacement of servicing previously provided by an affiliated company or otherwise. Supplementary Schedule No. 5 also shows the effect of eliminating intercompany billing for transportation services between Central Massachusetts and Worcester which affected Transportation Clearing and between Mystic Valley and Suburban which directly affected operating expense.

The last category on the tabulation is Miscellaneous showing a net increase of $2,400 to Stores Clearing, $1,800 to Transportation Clearing and $3,100 to Other Clearing and a total of $7,300 which are brought about by net increases in telephone charges chargeable to clearing accounts and elimination of intercompany billings which had affected clearing accounts in actual 1958 operation.

The distribution of increased charges to clearing accounts under pro forma combined operation shown at the bottom of the attached tabulation is based upon an analysis of the reason for each change in the charges to that clearing account. In the case of Stores Clearing the distribution of charges depends upon the type of materials handled. Since no change in the type of materials handled is anticipated as a result of severance, distribution of the $45,100 net increase in charges to Stores Clearing is based upon an analysis of how the increase would have been distributed on the basis of actual type of materials handled in 1958. Therefore, the distribution follows in general the actual distribution between maintenance, construction and other accounts during the year 1958.

In the case of Transportation Clearing some of the changes in charges in this account are attributable to a change in the cost of providing transportation services for the same purposes as they were actually provided in 1958; in these cases distribution is based upon the actual use of these transportation services in 1958. Since most construction work for the gas companies was done by outside contractors the bulk of the Transportation Clearing account was charged to operating expense accounts. This would also be the case under pro forma combined operation and therefore the bulk of these increases in charges to Transportation Clearing is distributed to expense accounts. Other changes result from the necessity of providing additional transportation equipment, over and above those actually provided in 1958 principally passenger cars for customer service or general use. In these instances the distribution is based upon a consideration of the purposes for which each change in transportation equipment has been made.

The distribution of Other Clearing accounts has been arrived at in a similar way, by an analysis of the reasons for each change in charges to these accounts. The net decrease in charges to Other Clearing accounts is largely attributable to a decrease in time to be spent by the Central Organization gas engineers on matters chargeable to preliminary survey and investigation clearing and to elimination of Service Company billings charged to that account; therefore, the decrease in charges to other clearing accounts is largely distributed to plant.

COMBINED OPERATION

SOURCE AND DISTRIBUTION OF CLEARING ACCOUNTS

Source of Increase	Stores Clearing	Transportation Clearing	Other Clearing	Total
Executive, Administrative and Staff				
Page 2 - Exhibit 105	($3,100)	($2,100)	($7,400)	($12,600)
Production, Distribution, Utilization and Garage				
Page 337 - Exhibit 58A (Lynn Gas)		5,500		5,500
Page 435 - Exhibit 58A (Mystic Valley Gas)		(3,800)		(3,800)
Page 527 - Exhibit 58A (North Shore Gas)		4,300		4,300
General Accounting				
Page 341 - Exhibit 58A (Lynn Gas)	(1,900)			(1,900)
Stores				
Supplementary Schedule No. 3 - Exhibit 105	26,800			26,800
Facilities				
Supplementary Schedule No. 4 - Exhibit 105	20,900	600		21,500
Transportation				
Supplementary Schedule No. 5 - Exhibit 105		34,400		34,400
Miscellaneous				
Various pages - Exhibit 58-A (Note A)	2,400	1,800	3,100	7,300
Net increase in clearing accounts	$45,100	$40,700	($4,300)	$81,500

	Expense	Plant and Other	Total
Distribution of Stores Clearing	$15,100	$30,000	$45,100
Distribution of Transportation Clearing	39,000	1,700	40,700
Distribution of Other Clearing	(700)	(3,600)	(4,300)
	$53,400	$28,100	$81,500

Note A - The amounts shown under miscellaneous consist of increases in telephone charges and other adjustments involving intercompany billings, the elimination of which effects clearing accounts.

RESPONDENTS' EXHIBIT NO. 110

Explanation of the Derivation of the Increase in Charges to Operating Expenses on Account of Executive, Administrative and Staff Costs as Shown on Page 2 of Exhibit 105

Attached is a table with explanatory notes showing the derivation of the various figures shown at the bottom of page 2 of Respondents' Exhibit 105, including the figure of $205,900 reflecting the increase in executive, administrative and staff costs chargeable to operating expense. This figure also appears at the top of the second column of figures on page 40 of Exhibit 91.

With respect to the $12,600 and $5,100 minus figures shown at the bottom of page 2 of Exhibit 105, the $12,600 decrease in charges to clearing accounts is the net effect of the charges discussed in notes 4 and 7 to the attached table; and the $5,100 decrease is the net effect of the matters explained in notes 3 and 5.

The reconciliation at the bottom of page 2 of Exhibit 105 is designed to summarize the effects on all accounts of the change in costs reflected in the main table on that page, and which must be taken into consideration in reaching the total at the bottom of page 40 of Exhibit 91. As already stated, the $205,900 figure appears at the top of page 40 of Exhibit 91. Of the amounts entering into the $5,100 minus figure at the bottom of page 2 of Exhibit 105, a minus $5,700 enters into the $8400 decrease shown for New Business costs on page 40 of Exhibit 91, as explained in note 5 to the attached table. The $12,600 minus figure at the bottom of page 2 of Exhibit 105 is included in the net change in charges to clearing accounts as reflected in the total of $53,400 on page 40 of Exhibit 91, to the extent it is ultimately chargeable to expense through the distribution of clearing accounts. (See the answer to the separate request for information with respect to said $53,400 of distribution of clearing accounts.)

	Actual	Pro Forma	Increase
Executive, Administrative and Staff Payroll at 1958 Levels 1/	$529,900	$ 886,400	$ 356,500
Expense Reimbursement 1/	16,000	35,000	19,000
Payroll Taxes and Fringe Benefits 2/	79,500	133,000	53,500 1/
Total Payroll, etc.	$625,400	$1,054,400	$429,000
Less Distribution of Payroll, etc. to Other Than Operating Expense:			
Plant Accounts 3/	$ 20,000	$ 20,600	$ 600
Clearing Accounts 4/	23,500	15,700	(7,800)
Merchandising Expense 5/	5,700	--	(5,700)
	$ 49,200	$ 36,300	$(12,900)
*Distribution of Payroll, etc. to Operating Expense	$576,200	$1,018,100	$441,900
NEPSCO Billing 6/	$235,300	--	$(235,300)
Worcester Billing 1/	5,500	--	(5,500)
Total Billing	$240,800	--	$(240,800)
Less Distribution of NEPSCO Billing to Clearing Accounts 7/	$ 4,800	--	$(4,800)
*Distribution of Billing to Operating Expense	$236,000	--	$(236,000)
Sum of Items marked with asterisk (*), or Increase in Operating Expense	$812,200	$1,018,100	$ 205,900

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[1] See Exhibit 105, page 2.

[2] 15% of Payroll.

[3] Actual charges to plant were chiefly for services of Gas Division Engineers. These charges are constant upon going to pro forma organization except for an estimated additional charge of $1,300 for engineering to be performed by the Central Organization engineers for Lynn Gas Company and charged to plant. This increase is offset by elimination of $700 actually charged in 1958 to plant on account of joint engineering services performed by the Lynn Gas and Electric Company engineering staff.

[4] Pro forma charges to clearing accounts are less than the 1958 actual charges on account of three factors:

(a) Included in the actual executive, administrative and staff figures for 1958 is a Garage Mechanic and Transportation Supervisor at Northampton (Exhibit 58A — Page 610) whose salary was charged to transportation clearing in the amount of $2,100; since no person performing equivalent services is

included in the pro forma executive, administrative and staff group no such charge is made in the pro forma figures.

(b) In 1958, $2,100 was charged to intercompany billing clearing for services to the gas department of Narragansett Electric Company; since such services would not be performed if the gas companies were separated from NEES no such charge is made in the pro forma figures.

(c) Integration of the Lynn gas department into the organization and elimination of joint engineering services by the Lynn Gas and Electric Company, with resulting increased demands upon the Central Organization engineering staff, would require curtailment of other actual activities charged to clearing accounts (chiefly preliminary survey and investigation) in an estimated amount of $3,600. These services would have to be obtained from outside the company, and since no provision has been made for the cost of these services in the pro forma organization, no corresponding charge to clearing accounts is appropriate.

[5] In 1958, $4,700 of the salary of the Assistant Manager at North Shore and $1,000 of executive salary at Norwood was charged to merchandising (a non-operating income account). In the pro forma organization the Assistant Manager at North Shore has been eliminated and to achieve uniformity the charge to merchandising at Norwood has been eliminated. While these adjustments increase the difference between pro forma and actual executive, administrative and staff costs charged to operating expense, they have no effect on the total at the bottom of page 40 of Exhibit 91 because the adjustment is offset by a decrease in costs of merchandising (an increase in non-operating income) which is included in the reduction in New Business expense in the third line on page 40 of Exhibit 91. (See page 3 of Exhibit 105).

[6] Does not include billings charged directly to capital accounts.

[7] This figure consists of $3,100 charged to stores clearing and $1,700 to other clearing accounts, primarily preliminary survey and investigation. No provision for equivalent services has been made in the pro forma organization.

RESPONDENTS' EXHIBIT NO. 111

MYSTIC VALLEY GAS COMPANY —
SUBURBAN ELECTRIC COMPANY

IBM Machine Rental Allocation

	Mystic Valley Gas Company	*Suburban Electric Company*	*Total*
Rentals Paid to IBM (24 Machines)	$28,800	$19,900	$48,700
Amount Billed by Mystic to Suburban	(13,300)	13,300	—
Amount Billed by Suburban to Mystic	11,300	(11,300)	—
Allocation of Total Costs	$26,800	$21,900	$48,700

The rentals paid to IBM by each of the two companies bore no relationship to the final distribution of costs, but were merely the result of a grouping of machines for purposes of billing. The purpose of cross billing between Mystic and Suburban is to arrive at an equitable allocation of total rentals between the gas and electric companies.

The allocation of costs to be accomplished by cross billing is determined by a work load analysis as follows: An analysis of work load on the machines showed 30% to be general accounting and 70% to be customer accounting functions. Furthermore, gas and electric general accounting work performed was found to be approximately equal in amount, and therefore the 30% of the total applicable to general accounting was allocated 15% to each company. The 70%, relating to customer accounting functions, was allocated 30% to Suburban and 40% to Mystic, in direct proportion to the billing work load involved. A combination of the amount allocated under each function results in an overall allocation of 55% to Mystic and 45% to Suburban which is the result of the cross billing set forth above.

In addition, customer bills for North Shore Gas Company and the Salem-Beverly-Gloucester area of Merrimack-Essex Electric Company are also prepared on these machines for which Mystic Valley bills North Shore for the gas bills prepared and Suburban bills Merrimack-Essex for the electric bills prepared. The billing to North Shore and Merrimack-Essex is based upon total machine rentals and payroll costs applicable to the total bills prepared for the four companies, with the charges to North Shore and Merrimack being allocated in proportion to the total on a cost per bill basis. The total amount billed by Mystic to North Shore for this service was approximately $11,800, half of which is taken as a credit to machine rental costs on page 445 of Exhibit 58A and the other half as a credit to payroll costs on page 442.

CENTRAL MASSACHUSETTS GAS COMPANY

Joint Space Occupied - 1958

	Total Area Square Feet	Electric	Gas	Total Costs	Electric	Gas	Rentals
Actual Operation - Electric Buildings							
General Office and Appliance Display (Main Street, Webster)	10,000	7,100	2,900	$13,800	$ 9,100	$4,700 (1)	$ 4,000
Office and Appliance Display (Main Street, Southbridge)	14,500	11,700	2,800	20,300	16,600	3,700	3,700
Office and Appliance Display (Main Street, Spencer)	1,700	900	800	3,400	1,900	1,500	1,500
Garage and Shop (Wellington Street, Webster)	3,600	2,400	1,200	4,500	3,000	1,500	1,500
Stockroom (Wellington Street, Webster)	7,400	6,700	700	4,400	4,000	400	400
Storage (Electric Substation) (Southbridge)	-						100
Garage (Main Street, Webster)	-						200
							11,400
Applicable to Merchandising							2,200
				Exhibit 58-4, page 132			$ 9,200
Actual Operation - Gas Buildings							
Operating Departments and Stockrooms (Elm Street, Spencer)	3,500	1,700	1,800	1,100	500	600	$500
Stockroom and Garage	3,400	1,400	2,000	900	300	600	300
				Exhibit 58-4, page 132			$800

(1) Including $700 billed to Wachusett for space occupied by joint general accounting group.

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RESPONDENTS' EXHIBIT NO. 112
Res. #1/2

CENTRAL MASSACHUSETTS GAS COMPANY

Pro Forma Space Requirements

	Square Foot Area	Estimated Total Cost	Chargeable to Merchandising	Facilities Cost Exhibit 58A	Billed to Wachusett (N. & B.)	Facilities Cost Exhibit 105
Independent Operation						
General Office, Appliance Display and Stockroom	8,800)					
Appliance Display and cashiering, etc., in Southbridge	1,000)	$29,900	$4,400	$25,500		
Appliance Display and cashiering, etc., in Spencer	1,000)					
Combined Operation (Note A)						
General Office, Appliance Display and Stockroom in Webster	8,200)					
Appliance Display and cashiering, etc., in Southbridge	1,000)	$28,300	$4,400		$1,800	$22,100
Appliance Display and cashiering, etc., in Spencer	1,000)					

Note A - After adjustments for elimination of space for 7 E. & A. personnel and 5 general accounting personnel under independent operation, and provision for 5 E. & A. personnel and 7 general accounting personnel under combined operation. General Superintendent in both instances would be housed in owned property.

Note B - Billing of one-half space requirements of 3 E. & A. and 7 general accounting personnel performing joint work for Central Mass. Gas and Wachusett Gas.

LAWRENCE GAS COMPANY

Joint Space Occupied - 1958

Actual Operation - Electric Buildings	Total Area Square Feet	Electric	Gas	Total Costs	Electric	Gas	Rentals
General Office and Appliance Display (Essex Street, Lawrence)	20,800	12,300(1)	8,500	$63,500	$38,000(1)	$25,500	$25,500
General Shop (Methuen Street, Lawrence)	18,100	16,700	1,400	22,600	21,000	1,600	1,600
Storehouse (Methuen Street, Lawrence)	11,900	10,500(2)	1,400	11,300	10,000(2)	1,300	1,300
Garage and Shop (Methuen Street, Lawrence)	22,100	13,900	8,200	25,700	16,300	9,400	9,400
							37,800
Applicable to Merchandising							700
					Exhibit 58-A, Page 232		$37,100
Actual Operation - Gas Land							
Storage Space (Marston Street, Lawrence)					Exhibit 58-A, Page 232		$1,200

(1) Including space occupied by New England Power Company

(2) Including space occupied by New England Power Service Company

LAWRENCE GAS COMPANY

Pro Forma Space Requirements

	Square Foot Area	Estimated Total Cost	Chargeable to Merchandising	Facilities Cost Exhibit 58A	Billed to North Shore (Note B)	Facilities Cost Exhibit 105
Independent Operation						
General Office and Appliance Display	12,100					
Distribution and Utilization Depts., Appliance Installation Supervisor and Stockrooms	12,000	$66,400	$5,600	$60,800		
Garage (conversion of owned building)	4,200	3,300		3,300		
				$64,100		
Combined Operation (Note A)						
General Office and Appliance Display	11,100					
Distribution and Utilization Depts., Appliance Installation Supervisor and Stockrooms	12,000	$63,600	$5,600		$3,000	$55,000
Garage (conversion of owned building)	4,200	3,300				3,300
						$58,300

Note A – After adjustments for elimination of space for 15 E. & A. personnel and 9 general accounting personnel under independent operation, and provision for 8 E. & A. personnel and 14 general accounting personnel under combined operation.

Note B – Billing of one-half space requirements of 4 E. & A. and 14 general accounting personnel performing joint work for Lawrence Gas and North Shore Gas.

MYSTIC VALLEY GAS COMPANY

JOINT SPACE OCCUPIED - 1958

	Total Area Square Feet	Electric	Gas	Total Cost	Electric	Gas	Rentals
Actual Operation - Electric Buildings							
General Office and Appliance Display (Pleasant Street, Malden)	43,000	23,000	20,000	$154,000	$82,000	$72,000	$72,000
Appliance Display and Cashiering (Bartlett Street, Winthrop)	2,300	1,400	900	6,400	3,900	2,500	2,500
Service Center (Centre Street, Malden)	1,800	1,000	800	2,700	1,500	1,200	1,200
Garage and Shop (Centre Street, Malden)	50,000	-	-	-	-	6,000(1)	6,000
Appliance Display and Cashiering (Broadway, Everett - Leased)	2,000	1,100	900	4,000 *	2,100	1,900	1,900
Appliance Display and Cashiering (High Street, Medford - Leased)	1,600	900	700	2,800 *	1,500	1,300	1,300
Actual Operation - Jointly Leased Space							
Appliance Display and Cashiering (Main Street, Melrose)	1,400	800	600	1,800 *	1,000	800	800
Appliance Display, Cashiering, etc. (Broadway, Revere)	2,000	1,100	900	3,900 *	2,200	1,700	1,700
Branch Store Expenses (4 Leased Stores)	7,000	3,900	3,100	6,700	3,700	3,000	3,000
							$90,400
Chargeable to Merchandising							4,600
				Exhibit 58-A, page 443			$85,800

* Cost of Space Only

(1) Light Vehicles at $10 per month and Heavy Vehicles at $15 per month

MYSTIC VALLEY GAS COMPANY

PRO FORMA SPACE REQUIREMENTS

	Square Foot Area	Estimated Total Cost	Chargeable to Merchandising	Facilities Cost Exhibit 58-A	Facilities Cost Exhibit 105
Independent Operation					
General Office and Appliance Display in Malden	22,400				
Appliance Display and Cashiering in Winthrop	1,200				
Appliance Display and Cashiering in Everett	1,200	$79,000	$6,700	$72,300	
Appliance Display and Cashiering in Medford	1,200				
Appliance Display and Cashiering in Melrose	1,200				
Appliance Display, Cashiering and Sales in Revere	1,500				
Garage and Shop in Malden	10,000	15,000		15,000	
		$94,000	$6,700	$87,300	
Combined Operation (Note A)					
General Office and Appliance Display in Malden	18,000				
Appliance Display and Cashiering in Winthrop	1,200				
Appliance Display and Cashiering in Everett	1,200	$66,900	$6,700		$60,200
Appliance Display and Cashiering in Medford	1,200				
Appliance Display and Cashiering in Melrose	1,200				
Appliance Display, Cashiering and Sales in Revere	1,500				
Garage and Shop in Malden	10,000	15,000	-		15,000
		$81,900	$6,700		$75,200

NORTH SHORE GAS COMPANY

Joint Space Occupied - 1958

	Total Area Square Feet	Electric	Gas	Total Costs	Electric	Gas	Rentals
Actual Operation - Electric Buildings							
General Office and Appliance Display (Washington Street, Salem - Leased)	13,900	8,600	5,300	$38,500	$23,900	$14,600	$14,600
Applicable to Merchandising							1,400
					Exhibit 58-A, Page 533		$13,200
Actual Operation - Gas Buildings							
Office and Appliance Display (Cabot Street, Beverly)	8,900	3,000	5,900	$15,000	$5,000	$10,000	$5,000
Office and Appliance Display (Main Street, Gloucester)	5,200	3,400	1,800	10,200	5,400	3,500	5,400
Storage Shed and Land (River Street, Beverly)							1,400
					Exhibit 58-A, Page 533		$11,800

NORTH SHORE GAS COMPANY

Pro Forma Space Requirements

	Square Foot Area	Estimated Total Cost	Chargeable to Merchandising	Facilities Cost-Exhibits 58A & 105 Net Increase	Operating Revenue	Operating Expense
Independent Operation						
General Office and Appliance Display (Cabot Street, Beverly)	11,900	$11,300(1)		$11,300	($9,900)	$1,400
Office and Appliance Display (Main Street, Gloucester)	5,200	5,400		5,400	(5,400)	
Storage Shed and Land (River Street, Beverly)		1,400		1,400	(1,400)	
Appliance Display and Cashiering (Salem)	1,500	4,100	$1,200	2,900		2,900
				21,000	(16,700)	4,300
General Office and Appliance Display (Washington Street, Salem)		(13,200)		(13,200)		(13,200)
		$ 9,000	$1,200	$ 7,800	($16,700)	($ 8,900)
Combined Operation						
General Office and Appliance Display (Cabot Street, Beverly)	10,900	$ 9,300(2)		$ 9,300	($7,900)	$ 1,400
Office and Appliance Display (Main Street, Gloucester)	5,200	5,400		5,400	(5,400)	
Storage Shed and Land (River Street, Beverly)		1,400		1,400	(1,400)	
Appliance Display and Cashiering (Salem)	1,500	4,100	$1,200	2,900		2,900
Billing by Lawrence Gas (Joint Treasury activities)		3,000		3,000		3,000
				22,000	(14,700)	7,300
General Offices and Appliance Display (Washington Street, Salem)		(13,200)		(13,200)		(13,200)
		$10,000	$1,200	$8,800	($14,700)	($5,900)

(1) Loss of rentals of $4,900 from outside tenants, $5,000 from Merrimack-Essex Electric and costs applicable to space vacated by outside tenants.

(2) Loss of rentals of $2,900 from outside tenants, $5,000 from Merrimack-Essex Electric and costs applicable to space

(2) Loss of rentals of $2,900 from outside tenants, $5,000 from Merrimack-Essex Electric and costs applicable to space vacated by outside tenants.

NORTHAMPTON GAS LIGHT COMPANY

Joint Space Occupied - 1958

Actual Operation - Gas Buildings	Total Area Square Feet	Electric	Gas	Total Costs	Electric	Gas	Rentals
General Office, Appliance Display and Operating Departments (Main Street, Northampton)	12,400	6,800	5,600	$35,900	$19,700	$16,200	$19,700
Garage and Shop (Crafts Avenue, Northampton)	3,000	1,800	1,200	4,500	2,700	1,800	2,700
Storehouse (Crafts Avenue, Northampton)	6,600	4,200	2,400	5,800	3,700	2,100	3,700
Land for Storage (South Street, Northampton)							200
						Exhibit 58-A, Page 627	$26,300

NORTHAMPTON GAS LIGHT COMPANY

Pro Forma Space Requirements

	Space Foot Area (1)	Total Cost	Rentals from Outsiders	Loss of Northampton Electric Rentals	Increased Costs
Independent or Combined Operation					
General Office, Appliance Display and Operating Departments (Main Street, Northampton)	11,300	$35,900	$3,000	($19,700)	$16,700
Garage and Shop (Crafts Avenue, Northampton)	3,000	4,500		(2,700)	2,700
Storehouse (Crafts Avenue, Northampton)	6,600	5,800		(3,700)	3,700
Land for Storage (South Street, Northampton)				(200)	200
			Exhibit 58-A, Page 628 and Exhibit 105 (Operating Revenues)		$23,300

(1) Includes excess space requirements which cannot be rented because of location

WACHUSETT GAS COMPANY

Joint Space Occupied - 1958

Actual Operation - Electric Buildings	Total Area Square Feet	Electric	Gas	Total Costs	Electric	Gas	Rentals
General Office and Appliance Display (Main Street, Leominster)	5,300	3,600	1,700	$16,000	$10,700	$5,300	$5,300
Office and Appliance Display (High Street, Clinton)	6,100	4,700	1,400	10,600	8,200	2,400	2,400
Stockroom (Mechanic Street, Leominster)	5,300	4,900	400	6,400	5,900	500	500
Stockroom and Garage (Parker Street, Clinton)	6,900	5,800	1,100	4,400	3,700	700	700
General Office (See Central Mass. Gas) (Main Street, Webster)							700
							$9,600
Applicable to Merchandising							2,600
							$7,000

Exhibit 58A, page 827

WACHUSETT GAS COMPANY

Pro Forma Space Requirements

	Square Foot Area	Estimated Total Cost	Chargeable to Merchandising	Facilities Cost Exhibit 58A	Billed from Central (Note B)	Facilities Cost Exhibit 105
Independent Operation						
General Office, Appliance Display and Stockroom	8,900)					
Appliance Display and cashiering, etc. in Clinton	1,000)	$27,400	$3,000	$24,400		
Combined Operation (Note A)						
General Office, Appliance Display and Stockroom in Leominster	6,500)					
Appliance Display and cashiering etc. in Clinton	1,000)	$20,800	$3,000		$1,800	$19,600

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Note A - After adjustments for elimination of space for 7 E. & A. personnel and 5 general accounting personnel under independent operation, and provision for 2 E. & A. personnel under combined operation. General Superintendent in both instances would be housed in owned property.

Note B - Billing of one-half space requirements of 3 E. & A. and 7 general accounting personnel performing joint work for Central Mass. Gas and Wachusett Gas.

RESPONDENTS' EXHIBIT NO. 113

CENTRAL MASSACHUSETTS GAS COMPANY
Customers and Population by Communities

	Population (1960 Census)	*Customers at December 31, 1960*
Brookfield	1,751	123
East Brookfield	1,533	121
North Brookfield	3,616	476
West Brookfield	2,053	202
Dudley	6,510	872
Leicester [1]	8,177	82
Spencer	7,838	921
Southbridge	16,523	3,524
Warren	3,383	294
Webster	13,680	3,173
Total	65,064	9,788

[1] Includes an estimated 2,500 served by Worcester Gas Light Company, a non-affiliate.

LAWRENCE GAS COMPANY
Customers and Population by Communities

	Population (1960 Census)	*Customers at December 31, 1960*
Lawrence	70,933	21,510
Methuen	28,114	6,365
Andover	15,878	2,920
North Andover	10,908	2,237
Total	125,833	33,032

Lynn Gas Company

Customers and Population by Communities

	Population (1960 Census)	*Customers at December 31, 1960*
Lynn	94,478	27,613
Swampscott	13,294	2,838
Saugus	20,666	4,076
Nahant	3,960	1,026
Marblehead	18,521	4,172
Lynnfield	8,398	798
Peabody [1]	1,123	330
Total	160,440	40,853

[1] Plus an estimated 31,100 served by North Shore Gas Company.

Mystic Valley Gas Company

Customers and Population by Communities

	Population (1960 Census)	*Customers at December 31, 1960*
Arlington	49,953	11,449
Belmont	28,715	6,273
Burlington	12,852	908
Everett	43,544	12,735
Lexington	27,691	2,404
Malden	57,676	15,987
Medford	64,971	16,027
Melrose	29,619	6,901
Reading	19,259	1,955
Revere	40,080	9,992
Stoneham	17,821	2,483
Winchester	19,376	3,361
Winthrop	20,303	5,406
Woburn	31,214	3,850
Fringe Customers		18
Total	463,074	99,749

NORTH SHORE GAS COMPANY

Customers and Population by Communities

	Population (1960 Census)	*Customers at December 31, 1960*
Beverly	36,108	7,576
Danvers	21,926	3,363
Gloucester	25,789	5,861
Peabody [1]	32,202	6,307
Rockport	4,616	131
Salem	39,211	10,200
Total	159,852	33,438

[1] Includes 1,123 served by Lynn Gas Company.

NORTHAMPTON GAS LIGHT COMPANY

Customers and Population by Communities

	Population (1960 Census)	*Customers at December 31, 1960*
Northampton	30,058	5,713
Easthampton	12,326	2,296
Total	42,384	8,009

NORWOOD GAS COMPANY

Customers and Population by Communities

	Population (1960 Census)	*Customers at December 31, 1960*
Norwood	24,898	4,912

WACHUSETT GAS COMPANY

Customers and Population by Communities

	Population (1960 Census)	*Customers at December 31, 1960*
Clinton	12,848	2,800
Lancaster	3,958	15
Leominster	27,929	5,142
Lunenburg [1]	6,334	87
Total	51,069	8,044

[1] Includes estimated 400 served by Fitchburg Gas and Electric Light Company.

RESPONDENTS' EXHIBIT NO. 113A

CERTAIN NON-AFFILIATED GAS COMPANIES IN MASSACHUSETTS
POPULATION BY COMMUNITIES
(In Communities with over 25 meters at December 31, 1958)

	Population (1960 Census)
THE BERKSHIRE GAS COMPANY	
Adams	12,391
Clarksburg	1,741
Cheshire	2,472
Dalton	6,436
Greenfield	17,690
Lanesborough	2,933
Lee	5,271
Lenox	4,253
Montague	7,836
North Adams	19,905
Pittsfield	57,879
Stockbridge	2,161
Williamstown	7,322
Total	148,290
BROCKTON-TAUNTON GAS COMPANY	
Attleborough	27,118
Avon	4,301
Bridgewater	10,276
Brockton	72,813
Canton	12,771
Dighton	3,769
Duxbury	4,727
East Bridgewater	6,139

	Population (1960 Census)
Easton	9,078
Foxborough	10,136
Franklin	10,530
Hanover	5,923
Hanson	4,370
Holbrook	10,104
Lakeville	3,209
Mansfield	7,773
Marshfield	6,748
Medfield	6,021
Medway	5,168
Norton	6,818
Norwell	5,207
Pembroke	4,919
Randolph	18,900
Scituate	11,214
Seekonk	8,399
Sharon	10,070
Stoughton	16,328
Taunton	41,132
Walpole	14,068
West Bridgewater	5,061
Wrentham	6,685
Total	369,775

FALL RIVER GAS COMPANY

Fall River	99,942
Somerset	12,196
Swansea	9,916
Westport	6,641
Total	128,695

	Population (1960 Census)
HAVERHILL GAS COMPANY	
Amesbury	10,787
Boxford	2,010
Essex	2,238
Georgetown	3,755
Groveland	3,297
Hamilton	5,488
Haverhill	46,346
Ipswich	8,544
Manchester	3,932
Merrimac	3,261
Newbury	2,519
Newburyport	14,004
Rowley	2,783
Salisbury	3,154
Topsfield	3,351
Wenham	2,798
Total	118,267
LOWELL GAS COMPANY	
Billerica	17,867
Chelmsford	15,130
Dracut	13,674
Dunstable	824
Lowell	92,107
Pepperell	4,336
Tewksbury	15,902
Tyngsborough	3,302
Westford	6,261
Total	169,403

	Population (1960 Census)
SPRINGFIELD GAS LIGHT COMPANY	
Agawam	15,718
Chicopee	61,553
East Longmeadow	10,294
Longmeadow	10,565
Ludlow	13,805
South Hadley	14,956
Springfield	174,463
West Springfield	24,924
Wilbraham	7,387
Total	333,665
WORCESTER GAS LIGHT COMPANY	
Ashland	7,779
Auburn	14,047
Dedham	23,869
Framingham	44,526
Grafton	10,627
Holliston	6,222
Hopedale	3,987
Hopkinton	4,932
Hudson	9,666
Marlborough	18,819
Maynard	7,695
Milford	15,749
Millbury	9,623
Natick	28,831
Needham	25,793
Northbridge	10,800
Sherborn	1,806
Shrewsbury	16,622
Southborough	3,996

	Population (1960 Census)
Stow	2,573
Sutton	3,638
Upton	3,127
Uxbridge	7,789
Westborough	9,599
West Boylston	5,526
Westwood	10,354
Worcester	186,587
Total	494,582 [1]

[1] Excluding small part of City of Boston also served.

NOTE: The foregoing figures reflect a population growth in these communities between 1950 and 1960 of 18%. The population growth in that period in the communities served by the NEES gas companies listed in Exhibit No. 113 was 11%.

RESPONDENTS' EXHIBIT NO. 114

NEW ENGLAND ELECTRIC SYSTEM MASSACHUSETTS GAS COMPANIES

RATE OF RETURN DATA

	1958			1959		
	Rate Base (A)	Net Operating Income	Rate of Return Per Cent	Rate Bate (A)	Net Operating Income	Rate of Return Per Cent
Norwood Gas	$ 935,232	$ 65,891	7.1%	$ 1,197,870	$ 97,675	8.1%
Northampton Gas	1,573,600	94,248	6.0	1,685,342	116,924	6.9
Wachusett Gas	1,561,747	106,543	6.8	1,714,637	111,857	6.5
Central Mass. Gas	2,240,180	174,685	7.8	2,429,026	128,428	5.3
Lawrence Gas	5,030,036	335,153	6.7	5,415,565	393,539	7.3
North Shore Gas	8,310,518	465,513	5.6	8,562,219	510,529	6.0
Lynn Gas	6,176,647	464,881	7.5	6,157,343	313,138	5.1
Mystic Valley Gas	19,105,025	1,238,931	6.5	20,561,160	1,378,898	6.7
Total	$44,932,985	$2,945,845	6.6%	$47,723,162	$3,050,988	6.4%

(A) Rate Base is determined as follows:
Total Plant and General Equipment at December 31
Less: Depreciation Reserve
Contributions for Extensions
Plus: Materials and Supplies (excluding Gas Appliances and Appliance Repair Parts)

RESPONDENTS' EXHIBIT NO. 116

[Letterhead — NEW ENGLAND ELECTRIC SYSTEM]

April 18, 1961

Mr. Samuel Gishman, Asst. Chief Financial Analyst
Public Utility Regulation
Division of Corporate Regulation
Securities and Exchange Commission
Washington 25, D. C.

Dear Mr. Gishman:

This letter gives the information which you requested of me by telephone on Friday, April 14.

1. Referring to Exhibit 58A and the section applicable to Central Massachusetts Gas Company and more specifically page 138, the federal income tax reduction or saving allocated to that company in 1958 due to participation in the NEES consolidated return was $63,800. If savings from participation had been allocated without reference to the operating loss carry-over of Central utilized in the system's consolidated return in a prior year the reduction or saving allocated to Central would only have amounted to $1,900. Now referring to the first sheet of Exhibit 59 and making the same assumption, the federal income tax reduction for Central Massachusetts Gas Company for 1958 would have been $48,900 rather than an increase as shown of $13,000 and gross income before interest and dividends instead of showing a reduction of $115,500 would have shown a decrease of $53,600.

Also referring to Exhibit 59, if the loss carry-over had not been a factor in allocating federal income tax for the year 1958 the total reduction in federal income tax of the eight companies because of participation in the NEES con-

solidated return would have been $149,900 rather than $203,600 and gross income before interest and dividends would have been $903,900 rather than $957,600 as shown.

2. As I explained to you by 'phone, Massachusetts utilities pay a franchise tax to the Commonwealth of Massachusetts which totals 4.92% of taxable net income for federal income tax purposes. This tax is charged to tax expense in the year in which it is paid and is based on taxable net income for the preceding calendar year. This means that in 1958 our Massachusetts utilities paid a franchise tax of 4.92% of their 1957 taxable net income, which was recorded as tax expense in 1958. In response to your inquiry, if we had adjusted tax expense in 1958 for the reduction in Massachusetts franchise tax payable in 1959 to give effect to the decreased taxable net income, the effect would have been a tax reduction of $70,000 applicable to the $1,495,000 reduction in gross income before federal income tax shown in Exhibit 59, while the tax reduction would have been $54,700 applicable to the $1,165,600 of decreased grosss income shown on page 40 of Exhibit 91.

3. Your remaining request, as I understand it, is to assume combined operation of the eight gas companies for the year 1958 as shown in Exhibit 82, and adjust for (a) the cost increases shown in the second column on page 40 of Exhibit 91 and page 8 of Exhibit 105, (b) the filing of one federal income tax return that would include the eight companies on a combined basis and ignore the loss carry-over of Central Massachusetts Gas Company, (c) decrease the accruals for Massachusetts franchise tax payable in 1959 for these changes, (d) assume the same income deductions as set forth in Exhibit 82, and give you an adjusted income statement for 1958. Four copies of such an adjusted income statement are enclosed.

Sincerely yours

NEW ENGLAND ELECTRIC SYSTEM MASSACHUSETTS GAS SUBSIDIARIES
Adjusted Consolidated Income Statement
For the Year Ended December 31, 1958

	Gas Subsidiaries Consolidated per Exhibit 82	Adjustment re Central Massachusetts Gas Company (a)	Effect of Combined Operation after F.I.T. per Exhibit 91, page 40 and Exhibit 105, page 8	Adjustment of Massachusetts Franchise Tax (c)	Adjusted Gas Subsidiaries Consolidated
Gross Earnings					
Gas Sales	$22,666,175				$22,666,175
Other Operating Revenue	86,095		($38,000)		48,095
Total Operating Revenues	22,752,270		(38,000)		22,714,270
Merchandise and Jobbing	81,867				81,867
Other Income	91,918		(500)		91,418
Total Gross Earnings	22,926,055		(38,500)		22,887,555
Operating Expenses and Taxes					
Operating Costs	5,895,483		1,065,500		6,960,983
Purchased Gas	6,705,066				6,705,066
Maintenance ex. Amortization of Conversion Costs	1,649,467				1,649,467
Amortization of Cost of Converting Consumers' Appliances	625,316				625,316
Depreciation	1,140,357		25,200		1,165,557
Total Operating Expenses	16,015,689		1,090,700		17,106,389
Taxes - Municipal and State	2,101,643		27,500	($54,700)	2,074,443
Taxes - Federal (other than Income)	89,859		8,900		98,759
Taxes - Federal Income	1,600,367	($8,100)	189,900(b)		
		61,900	(577,700)		1,266,367
Total Taxes	3,791,869	53,800	(351,400)	(54,700)	3,439,569
Total Operating Expenses and Taxes	19,807,558	53,800	739,300	(54,700)	20,545,958
Gross Income (Balance before Interest)	3,118,497	(53,800)	(777,800)	54,700	2,341,597
Income Deductions					
Interest on Long-term Debt	754,613				754,613
Interest on Conversion Notes Payable	88,584				88,584
Amortization of Debt Discount and Expense	5,478				5,478
Interest on Short-term Notes Payable	175,210				175,210
Other Interest Expense	28,694				28,694
Interest during Construction - Credit	(7,579)				(7,579)
Other Charges against Income	3,933				3,933
Total Income Deductions	1,048,933				1,048,933
Net Income before Dividends	$ 2,069,564	($53,800)	($777,800)	$54,700	$1,292,664

( ) Indicates red figure

a) Gives effect to elimination of operating loss carry-over of Central Massachusetts Gas Company with resultant tax to Central Massachusetts of $61,900 and additional savings to the other gas subsidiaries of $8,100.
b) Comprises savings from participation in NEES consolidated return.
c) Reduction in Massachusetts Franchise Tax in subsequent year if changes shown in third column had been effective during year 1958.

NON-AFFILIATED MASSACHUSETTS GAS COMPANIES

RATE OF RETURN DATA (A)

	1958			1959		
	Rate Base(B)	Net Operating Income	Rate of Return Per Cent	Rate Base(B)	Net Operating Income	Rate of Return Per Cent
shire Gas	$ 5,629,026	$ 338,685	6.0%	$ 6,511,343	$ 336,917	5.2%
ton-Taunton Gas	11,523,164	712,613	6.2	12,583,221	767,711	6.1
River Gas	6,697,950	427,331	6.4	7,149,763	440,326	6.2
ill Gas	4,822,009	310,943	6.4	5,375,666	362,916	6.8
Gas	8,010,583	678,230	8.5	8,724,932	687,871	7.9
field Gas	16,519,503	1,070,684	6.5	17,529,219	1,117,288	6.4
ter Gas	20,382,241	1,094,618	5.4	22,497,979	1,003,016	4.5
als	$73,584,476	$4,633,104	6.3%	$80,372,123	$4,716,045	5.9%

etermined from information included in Annual Returns for 1958 and 1959 on file with the
achusetts Department of Public Utilities.

Berk... determined as follows:
Br... Total Plant and General Equipment at December 31
Less: Depreciation Reserve
Contributions for Extensions
Plus: Materials and Supplies (excluding Gas Appliances)

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RESPONDENTS' EXHIBIT NO. 117

RES. #117

NEW ENGLAND ELECTRIC SYSTEM

Investments in Eight Massachusetts Gas Subsidiaries

During Five Year Period 1956-1960

	Investments at January 1, 1956	Acquisition and (Retirement) of Securities during Period		Investments at December 31, 1960
		New Issues	Outstanding Issues	
Investments in Common Stocks				
Central Massachusetts Gas Company	$ 925,000	$ 700,000		$ 1,625,000
Lawrence Gas Company	2,795,520			2,795,520
Lynn Gas Company	-		$3,971,650	3,971,650
Mystic Valley Gas Company	8,661,267		7,496	8,668,763
North Shore Gas Company	2,992,531		26,999	3,019,530
Northampton Gas Light Company	250,000	630,025		880,025
Norwood Gas Company	122,600	139,700	120	262,420
Wachusett Gas Company	722,155	300,000		1,022,155
Total Investments in Common Stock	$16,469,073	$1,769,725	$4,006,265	$22,245,063
Investments in Notes Payable				
Lynn Gas Company	-	$1,489,000	($16,000)	$ 1,473,000
Northampton Gas Light Company	$ 550,000	5,725,000	(5,565,000)	710,000
North Shore Gas Company	365,000	365,000	(730,000)	-
Norwood Gas Company	565,000	7,302,500	(6,842,500)	1,025,000
Total Investments in Notes Payable	$1,480,000	$14,881,500	($13,153,500)	$ 3,208,000

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RESPONDENTS' EXHIBIT NO. 118

KES. 778

NEW ENGLAND ELECTRIC SYSTEM

FIVE ELECTRIC COMPANIES

RATE OF RETURN DATA

	1958			1959		
	Rate Base(A)	Net Operating Income	Rate of Return Per Cent	Rate Base(A)	Net Operating Income	Rate of Return Per Cent
Lynn Electric	$14,376,367	$ 603,014	4.2%	$14,344,607	$ 733,352	5.1%
Merrimack-Essex Electric	53,845,088	3,269,914	6.1	55,934,904	3,464,642	6.2
Northampton Electric	1,951,076	121,421	6.2	2,023,388	144,053	7.1
Suburban Electric	18,072,979	1,170,524	6.5	18,714,175	1,242,060	6.6
Worcester County Electric	69,857,419	3,579,525	5.1	71,958,936	4,231,816	5.9

(A) Rate Base is determined as follows:

Total Plant and General Equipment at December 31
Less: Depreciation Reserve
Contributions for Extensions
Plus: Materials and Supplies (excluding Electric Appliances and Appliance Repair Parts)

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DIVISION EXHIBIT NO. 1

NEW ENGLAND ELECTRIC SYSTEM
441 STUART STREET
BOSTON 16, MASSACHUSETTS

HARRY HANSON
VICE PRESIDENT AND TREASURER

February 21, 1961

Mr. Francis H. Spencer
Division of Corporate Regulation
Securities and Exchange Commission
Washington 25, D. C.

Dear Mr. Spencer:

Re: File No. 59-102

This is in answer to an inquiry by Mr. Samuel Gishman and Mr. Leon Ware concerning an explanation of the differences between insurance costs as shown by Exhibit 89 and the amounts shown as insurance expense (Account 671) on page 306 of the 1958 Returns of the gas companies to the Massachusetts Department of Public Utilities.

The principal reason for these differences is that the costs of certain of the coverages are chargeable to accounts other than Account 671. With respect to Automobile Physical Damage Insurance and Automobile Bodily Injury and Property Damage Insurance, premium costs are charged initially to transportation clearing accounts and subsequently distributed to other accounts based upon vehicle use by the various departments. With respect to Group Life, A.D.& D. and A.& H., these amounts are charged to Account 672. With respect to Water Heater Warranty Bond, premium costs are charged initially to a suspense account, and then amortized over the estimated lives of water heaters rented to customers. The costs of the remaining coverages shown in Exhibit 89 are those that are charged to Account 671, and, to a minor extent, other accounts. Another reason for the differences is that charges by New England Power Service Company for services relating to insurance coverages are included in Account 671, as are minor charges for policies not shown in Exhibit 89.

Exhibit 58 (the Gas Severance Study) shows for each company the total increases in insurance expense under independent operation and the amounts that would effect income accounts in the test year 1958. Similarly, Exhibit 91 (the Supplemental Report on Gas Severance) shows the total insurance savings under combined operation as compared to independent operation and the amount that would effect income accounts in the test year 1958.

Sincerely yours,

Harry Hanson

NEES 8 GAS COMPANIES
Actual Cost of Insurance per Books
D.P.U. Account G 671
Years 1954 - 1959 Inclusive

Company	1954	1955	1956	1957	1958	1959
Central Mass. Gas Co.	$ 5,764	$ 5,211	$ 5,256	$ 6,565	$ 4,725	$ 5,034
Lawrence Gas Co.	13,976	13,420	16,287	18,637	13,633	13,679
Lynn Gas and Electric Co. (Gas Dept.)	*	*	24,122	24,519	26,100	24,582
Mystic Valley Gas Co.	48,052	43,228	49,699	56,505	35,552	40,156
Northampton Gas Light Co.	5,559	4,225	5,175	5,809	4,326	4,394
North Shore Gas Co.	21,935	19,681	23,862	26,794	18,358	21,408
Norwood Gas Co.	1,655	1,980	2,396	2,640	2,134	2,601
Wachusett Gas Co.	4,740	4,225	3,891	4,739	3,633	3,598
Total	$101,681	$ 91,970	$130,688	$146,208	$108,461	$115,452
Elimination: Lynn Gas and Elec. Co. (Gas Dept.)	-	-	$ 24,122	$ 24,519	$ 26,100	$ 24,582
Total (7 Cos., excluding Lynn)	$101,681	$ 91,970	$106,566	$121,689	$ 82,361	$ 90,870

* Not available in filings with S.E.C.

Source: Annual Reports to Mass. D.P.U., contained in 72-8 files at S.E.C.

1440

Div. Exhibit No. 1

Source: Annual Reports to Mass. D.P.U., contained in 72-6 files at S.E.C.

NEW ENGLAND ELECTRIC SYSTEM

Summary of Increases in Insurance Charges to Account 671 Under Independent Operation

	Central Mass. Gas Company	Lawrence Gas Company	Lynn Gas Company	Mystic Valley Gas Company	North Shore Gas Company	Northampton Gas Light Company	Norwood Gas Company	Wachusett Gas Company
Cost of System Coverages Year 1958	$ 6,534	$18,166	$28,016	$ 50,050	$22,511	$ 5,885	$ 3,061	$ 5,024
Deduct:								
Automobile Physical Damage Insurance	22	60	74	160	30	23	14	19
Water Heater Warranty Bond	700	1,450	-	4,400	2,500	560	290	530
Automobile Bodily Injury and Property Damage	550	1,900	1,500	4,100	1,400	500	300	600
Group Life, A.D.& D. and A.& H.	450	1,255	1,300	3,770	1,360	300	160	230
Total Deductions	1,722	4,665	2,874	12,430	5,290	1,383	764	1,379
Balance charged principally to Account 671	$ 4,812	$13,501	$25,142	$ 37,620	$17,221	$ 4,502	$ 2,297	$ 3,645
Estimated Cost of Separate Coverages Year 1958	$26,070	$59,082	$65,500	$146,835	$67,433	$21,709	$14,220	$19,705
Deduct:								
Automobile Physical Damage Insurance	150	270	450	920	350	110	80	130
Water Heater Warranty Bond	1,100	2,200	-	6,600	3,800	840	430	800
Automobile Bodily Injury and Property Damage	1,800	4,500	8,300	16,400	4,300	970	1,300	1,600
Group Life, A.D.& D. and A.& H.	1,680	3,200	3,800	7,640	3,770	1,300	1,090	1,460
Total Deductions	4,730	10,170	12,550	31,560	12,220	3,220	2,900	3,990
Balance charged principally to Account 671	$21,340	$48,912	$52,950	$115,275	$55,213	$18,489	$11,320	$15,715
Increase in amount charged to Account 671	$16,528	$35,411	$27,808	$ 77,655	$37,992	$13,987	$ 9,023	$12,070

February 1961

Div. Exhibit No. 1

Div. Exhibit No. 1

NEW ENGLAND ELECTRIC SYSTEM

Summary of Increases in Insurance Charges to Account 671
Under Independent and Combined Operation

	8 Companies Independent Operation	8 Companies Combined Operation
Cost of System Coverages Year 1958	$139,247	$139,247
Deduct:		
Automobile Physical Damage Insurance	402	402
Water Heater Warranty Bond	10,430	10,430
Automobile Bodily Injury and Property Damage	10,850	10,850
Group Life, A.D.& D. and A.& H.	8,825	8,825
Total Deductions	30,507	30,507
Balance charged principally to Account 671	$108,740	$108,740
Estimated Cost of Coverages Year 1958	$420,554	$293,751
Deduct:		
Automobile Physical Damage Insurance	2,460	1,300
Water Heater Warranty Bond	15,770	10,430
Automobile Bodily Injury and Property Damage	39,170	36,170
Group Life, A.D.& D. and A.& H.	23,940	14,160
Total Deductions	81,340	62,060
Balance charged principally to Account 671	$339,214	$231,691
Increase in amount charged to Account 671	$230,474	$122,951

February 1961

Division Ex. 2

Eight (8) NEES Gas Companies
Statement showing Comparison of Customer Accounting Payroll Costs
Actual and Pro Forma
Year 1958 *

Company	Total Customers 12/31/58 (a)	Customer Accounting Payroll Costs						
		Actual		Pro Forma		Increase		
		Amount (b)	Per Cust. (c) (b)÷(a)	Amount (d)	Per Cust. (e) (d)÷(a)	Amount (f) (d)÷(b)	Per Cust. (g) (f)÷(a)	Percent (h) (f)÷(b)
Central Massachusetts Gas Co.	9,595	$ 51,600	$5.38	$ 70,200	$7.32	$ 18,600	$1.94	36%
Lawrence Gas Co.	32,801	144,400	4.40	171,500	5.23	27,100	0.83	19
Lynn Gas and Electric Co. (Gas Dept.)	40,922	168,400	4.12	306,100	7.48	137,700	3.36	82
Mystic Valley Gas Co.	98,773	378,000	3.83	512,800	5.19	134,800	1.36	36
Northampton Gas Light Co.	8,023	17,000	2.12	48,400	6.03	31,400	3.91	184
North Shore Gas Co.	33,113	143,300	4.33	189,900	5.73	46,600	1.41	33
Norwood Gas Co.	4,490	22,412	4.99	22,412	4.99	none	none	none
Wachusett Gas Co.	8,048	36,100	4.49	57,500	7.14	21,400	2.66	59
	235,765	$961,212	$4.08	$1,376,812	$5.85	$417,600	$1.77	43%

* Source: Respondents Ex. 58A

DIVISION EXHIBIT NO. 2
1443
Div. Exhibit No. 2

Division Ex. 3A

EIGHT (8) NEES GAS COMPANIES
STATEMENT OF TOTAL DOMESTIC GAS SALES AND REVENUES
YEAR 1958

Company	No. of Domestic Customers 12/31/58 1/ (a)	Total Domestic Gas Sales Mcf 2/ (b)	Total Domestic Gas Sales Mcf./Cust. (c) b÷a	Total Domestic Operating Revenue Amount 1/ (d)	Total Domestic Operating Revenue Per Cust. (e) d÷a	Total Domestic Operating Revenue Per Mcf Sold (f) d÷b
Central Massachusetts Gas Co.	9,128	357,346	39.1	$ 749,076	$82.06	$2.0962
Lawrence Gas Co.	31,124	1,178,760	37.9	2,572,745	82.66	2.1826
Lynn Gas and Electric Co. (Gas Dept.)	38,842	1,181,742	30.4	2,803,188	72.17	2.3721
Mystic Valley Gas Co.	94,993	3,353,465	35.3	8,029,276	84.52	2.3943
Northampton Gas Light Co.	7,587	302,024	39.8	622,416	82.04	2.0608
North Shore Gas Co.	31,313	1,026,130	32.6	2,519,065	80.45	2.4694
Norwood Gas Co.	4,254	181,054	42.6	400,732	94.20	2.2133
Wachusett Gas Co.	7,693	286,057	37.2	662,362	86.10	2.3155
TOTAL	225,134	7,860,578	34.9	$18,358,860	$81.55	$2.3356

1/ Source: Respondents Ex. 58A

2/ Source: Annual Returns to Mass. D.P.U. for 1958.

1444
DIVISION EXHIBIT NO. 3A
Div. Exhibit No. 1

EIGHT (8) MASS GAS COMPANIES
STATEMENT OF TOTAL DOMESTIC GAS SALES AND REVENUES
YEAR 1959

Company	Total Domestic Customers 12/31/59 1/	Total Domestic Gas Sales		Total Domestic Operating Revenue		
		Mcf 1/	Mcf/Cust.	Amount 1/	Per Cust.	Per Mcf Sold
	(a)	(b)	(c) b÷a	(d)	(e) d÷a	(f) d÷b
Central Massachusetts Gas Co.	9,236	410,836	44.5	$ 839,192	$90.86	$2.0426
Lawrence Gas Co.	31,013	1,379,582	44.5	2,868,732	92.50	2.0794
Lynn Gas and Electric Co. (Gas Dept.)	38,777	1,319,770	34.0	3,023,447	77.9	2.2909
Mystic Valley Gas Co.	95,345	3,782,862	39.7	8,735,436	91.62	2.3092
Northampton Gas Light Co.	7,510	345,533	46.0	697,739	92.91	2.0193
North Shore Gas Co.	31,368	1,165,278	37.1	2,773,308	88.41	2.3800
Norwood Gas Co.	4,402	216,655	49.2	458,271	104.11	2.1152
Wachusett Gas Co.	7,659	326,144	42.6	720,383	94.06	2.2088
TOTAL	225,310	8,946,660	39.7	$20,116,508	$89.28	$2.2485

1/ Source: Annual Returns to Mass. D.P.U. for 1959

DIVISION EXHIBIT NO. 3B
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Div. Exhibit No. 3B

Division Ex. 3C

Eight (8) NEES Gas Companies
Statement of Total Gas Sales and Revenues
Year - 1958

Company	Total Customers 12/31/58 1/ (a)	Total Gas Sales Mcf 2/ (b)	Total Gas Sales Mcf/Cust. (c) b÷a	Total Revenue from Sales of Gas Amount 1/ (d)	Total Revenue from Sales of Gas Per Cust. (e) d÷a	Total Revenue from Sales of Gas Per Mcf Sold (f) d÷b
Central Massachusetts Gas Co.	9,595	607,376	63.3	$1,021,105	$106.42	$ 1.6812
Lawrence Gas Co.	32,801	1,594,148	48.6	3,075,132	93.75	1.9290
Lynn Gas and Electric Co. (Gas Dept.)	40,922	1,644,416	40.2	3,667,374	89.62	2.2302
Mystic Valley Gas Co.	98,773	4,187,398	42.4	9,361,132	94.77	2.2355
Northampton Gas Light Co.	8,023	416,551	51.9	821,139	102.35	1.9713
North Shore Gas Co.	33,113	1,395,295	42.1	3,237,876	97.78	2.3206
Norwood Gas Co.	4,490	232,444	51.8	505,530	112.59	2.1748
Wachusett Gas Co.	8,048	341,554	42.4	788,804	98.01	2.3095
Total	235,765	10,419,182	44.2	$22,478,092	$ 95.34	$ 2.1574

1/ Source: Respondents Ex. 58A

2/ Source: Annual Returns to Mass. D. P. U. for 1958.

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DIVISION EXHIBIT NO. 3C

Div. Exhibit No. 3

Eight (8) NEES Gas Companies
Statement of Total Gas Sales and Revenues
Year 1959

Division Ex. 3D

	Total Customers 12/31/59 (a)	Total Gas Sales Mcf (b)	Total Gas Sales Mcf/Cust. (c) b÷a	Total Revenue from Sales of Gas Amount (d)	Total Revenue from Sales of Gas Per Cust. (e) d÷a	Total Revenue from Sales of Gas Per Mcf Sold (f) d÷b
Central Massachusetts Gas Co.	9,726	754,943	77.6	$ 1,172,171	$120.52	$1.5527
Lawrence Gas Co.	32,807	2,085,404	63.6	3,540,911	107.93	1.6979
Lynn Gas and Electric Co. (Gas Department	40,918	1,698,403	41.5	3,771,487	92.17	2.2206
Mystic Valley Gas Co.	99,330	4,874,213	49.1	10,248,773	103.18	2.1027
Northampton Gas Light Co.	7,967	466,767	58.6	921,910	115.72	1.9751
North Shore Gas Co.	33,252	1,638,676	49.3	3,632,262	109.23	2.2165
Norwood Gas Co.	4,656	281,001	60.4	585,053	125.66	2.0820
Wachusett Gas Co.	8,021	389,966	48.6	857,526	106.91	2.1990
Total	236,677	12,189,373	51.5	$24,730,093	$104.49	$2.0288

Source: Annual returns to Mass. D.P.U. for 1959

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DIVISION EXHIBIT NO. 3D
Div. Exhibit No. 3D

NINE (9) NATURAL GAS COMPANIES IN MASSACHUSETTS
(Included in Responsibility Ex. 20, Attachment 1)

Division Ex. 4A

NINE (9) NATURAL GAS COMPANIES IN MASSACHUSETTS
(Included in Respondent's Ex. 90) 1/
STATEMENT OF TOTAL SALES AND REVENUES
Year 1958*

Division Ex. 4A

Name of Company	Total No. of Customers 12/31/58	Total Gas Sales		Total Revenue from Sales of Gas		
		Mcf	Mcf/Cust.	Amount	Per Cust.	Per Mcf Sold
	(a)	(b)	(c) b÷a	(d)	(e) d÷a	(f) d÷b
The Berkshire Gas Co.	24,963	1,732,128	69.4	$ 2,954,276	$118.35	$1.7056
Boston Gas Co.	305,248	17,401,200	57.0	33,402,008	109.43	1.9195
Brockton Taunton Gas Co.	51,955	2,522,434	48.6	5,467,253	105.23	2.1674
Buzzards Bay Gas Co.	5,454	882,117	161.7	1,477,802	270.96	1.6753
Fall River Gas Co.	34,576	2,498,654	72.3	4,267,554	123.43	1.7079
Haverhill Gas Co.	19,786	1,638,600	82.8	2,889,832	146.05	1.7636
Lowell Gas Co.	29,206	2,959,857	101.3	4,035,088	138.16	1.3633
Springfield Gas Light Co.	66,179	4,825,771	72.9	8,713,966	131.67	1.8057
Worcester Gas Light Co.	77,940	7,828,971	100.4	12,851,969	164.90	1.6416
TOTAL (9 Cos.)	615,307	42,289,732	68.7	$76,059,748	$123.61	$1.7985
Eliminations:						
Boston Gas Co. 2/	305,248	17,401,200	57.0	$33,402,008	$109.43	$1.9195
Buzzards Bay Gas Co. 3/	5,454	882,117	161.7	1,477,802	270.96	1.6753
Total Elim. (2 Cos.)	310,702	18,283,317	58.8	$34,879,810	$112.26	$1.9077
TOTAL (7 Cos.)	304,605	24,006,415	78.8	$41,179,938	$135.19	$1.7154

*Source: Annual Returns to Mass. D.P.U. for 1958

1/ Cambridge Gas Co., New Bedford Gas and Ed. Lt. Co., and Fitchburg Gas and El. Lt. Co., included in Respondents Ex. 90, were excluded from this Statement because of joint affiliated gas and electric operations.

2/ Boston Gas did not convert to straight natural gas until 1960 (Source: Brown's Directory of American Gas Companies - 74th Edition).

3/ Per customer figures not comparable due to abnormally small number of customers reported at year end in relation to number of customers served during the year.

DIVISION EXHIBIT NO. 4A
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Div. Exhibit No. 4A

Division Ex. 4B

Nine (9) Natural Gas Companies in Mass.
(Included in Respondent's Ex. 90) 1/
Statement of Total Gas Sales and Revenues
Year 1959 *

Name of Company	Total No. of Customers 12/31/59 (a)	Total Gas Sales Mcf (b)	Total Gas Sales Mcf/Cust. (c) b ÷ a	Total Revenue from Sales of Gas Amount (d)	Per Cust. (e) d ÷ a	Per Mcf Sold (f) d ÷ b
The Berkshire Gas Co.	24,862	1,959,382	78.8	$ 3,254,370	$ 130.90	$ 1.6607
Boston Gas Co.	307,114	19,143,900	62.3	35,124,821	114.37	1.8348
Brockton Taunton Gas Co.	53,108	2,820,220	53.1	5,917,353	111.42	2.0982
Bussards Bay Gas Co.	6,171	998,875	161.9	1,710,131	277.12	1.7121
Fall River Gas Co.	34,582	2,668,719	77.2	4,551,010	131.60	1.7053
Haverhill Gas Co.	23,554	1,818,203	77.2	3,190,760	135.47	1.7549
Lowell Gas Co.	29,995	3,290,973	109.7	4,444,777	148.18	1.3506
Springfield Gas Light Co.	65,794	5,191,692	78.9	9,353,297	142.16	1.8016
Worcester Gas Light Co.	78,638	8,237,488	104.8	13,413,847	170.58	1.6284
Total (9 Cos.)	623,818	46,129,652	73.9	$80,960,366	$ 129.78	$ 1.7551
Eliminations:						
Boston Gas Co. 2/	307,114	19,143,900	62.3	$35,124,821	$ 114.37	$ 1.8348
Bussards Bay Gas Co. 3/	6,171	998,875	161.9	1,710,131	277.12	1.7121
Total Elim. (2 Cos.)	313,285	20,142,775	64.3	$36,834,952	$ 117.58	1.8287
Total (7 Cos.)	310,533	25,986,877	83.7	$44,125,414	$ 142.10	$ 1.6980

* Source: Annual Returns to Mass. D.P.U. for 1959.

1/ Cambridge Gas Co., New Bedford Gas and Ed. Lt. Co., and Fitchburg Gas and El. Lt. Co., included in Respondent's Ex. 90, were excluded from this statement because of joint affiliated gas and electric operations.

2/ Boston Gas did not convert to straight natural gas until 1960. (Source: Brown's Directory of American Gas Companies -- 74th Edition).

3/ Per customer figures not comparable due to abnormally small number of customers reported at year end in relation to number of customers served during the year.

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DIVISION EXHIBIT NO. 4B
Div. Exhibit No. 4

Division Ex. 4C

Nine (9) Natural Gas Companies in Mass
(Included in Respondent's Ex. 90) 1/
Statement of Total Domestic Gas Sales and Revenues
Year 1958 *

Name of Company	No. of Domestic Customers 12/31/58 (a)	Domestic Gas Sales Mcf (b)	Domestic Gas Sales Mcf/Cust. (c) b ÷ a	Domestic Operating Revenue Amount (d)	Domestic Operating Revenue Per Cust. (e) d ÷ a	Domestic Operating Revenue Per Mcf Sold (f) d ÷ b
The Berkshire Gas Co.	23,273	1,106,115	47.5	$ 2,195,863	$ 94.35	$ 1.9852
Boston Gas Co.	284,628	9,884,000	34.0	24,340,724	85.52	2.5135
Brockton Taunton Gas Co.	49,878	1,843,048	37.0	4,403,680	88.29	2.3883
Buzzards Bay Gas Co.	4,748	295,528	62.2	774,851	163.20	2.6219
Fall River Gas Co.	32,160	1,725,259	53.6	3,446,103	107.15	1.9974
Haverhill Gas Co.	19,148	1,357,600	70.9	2,623,393	137.01	1.9324
Lowell Gas Co.	27,412	1,853,628	67.6	3,135,112	114.37	1.6913
Springfield Gas Light Co.	62,803	3,617,576	57.6	6,950,067	110.66	1.9212
Worcester Gas Light Co.	73,011	4,622,451	63.3	8,670,323	118.75	1.8757
Total (9 Cos.)	577,061	26,106,005	45.2	$56,540,116	$ 97.98	$ 2.1658
Eliminations:						
Boston Gas Co. 2/	284,628	9,684,000	34.0	$24,340,724	$ 85.52	$ 2.5135
Buzzards Bay Gas Co. 3/	4,748	295,528	62.2	774,851	163.20	2.6219
Total Elim. (2 Cos.)	289,376	9,979,528	34.5	$25,115,575	$ 86.79	$ 2.5167
Total (7 Cos.)	287,685	16,126,477	56.1	$31,424,541	$109.23	$ 1.9486

* Source: Annual Returns to Mass. D.P.U. for 1958.

1/ Cambridge Gas Co., New Bedford Gas and Ed. Lt. Co., and Fitchburg Gas and Ed. Lt. Co., included in Respondent's Ex. 90, were eliminated from this statement because of joint affiliated gas and electric operations.

2/ Boston Gas did not convert to straight natural gas until 1960. (Source: Brown's Directory of American Gas Companies -- 74th Edition).

3/ Per customer figures not comparable due to abnormally small number of customers reported at year end in relation to number of customers served during the year.

Nine (9) Natural Gas Companies in Massachusetts
(Included in Respondent's Ex. 90) 1/
Statement of Total Domestic Gas Sales and Revenues
Year 1959 *

Name of Company	No. of Domestic Customers 12/31/59 (a)	Domestic Gas Sales Mcf (b)	Domestic Gas Sales Mcf/Cust. (c) b ÷ a	Domestic Operating Revenue Amount (d)	Domestic Operating Revenue Per Cust. (e) d ÷ a	Domestic Operating Revenue Per Mcf Sold (f) d ÷ b
The Berkshire Gas Co.	23,101	1,242,132	53.8	$ 2,408,737	$104.27	$1.9392
Boston Gas Co.	286,143	10,705,200	37.4	25,677,894	89.74	2.3986
Brockton Taunton Gas Co.	51,106	2,115,493	41.4	4,801,639	93.95	2.2697
Buzzards Bay Gas Co.	5,364	369,498	68.9	922,489	171.98	2.4966
Fall River Gas Co.	32,104	1,869,493	58.2	3,663,281	114.11	1.9595
Haverhill Gas Co.	21,915	1,383,841	63.1	2,671,718	121.91	1.9307
Lowell Gas Co.	28,089	2,051,001	73.0	3,395,763	120.89	1.6557
Springfield Gas Light Co.	62,291	3,768,308	60.5	7,270,432	116.72	1.9294
Worcester Gas Light Co.	73,537	5,200,654	70.7	9,455,199	128.58	1.8181
Total (9 cos.)	583,650	28,705,620	49.2	$60,267,152	$103.26	$2.0995
Eliminations:						
Boston Gas Co. 2/	286,143	10,705,200	37.4	$25,677,894	$ 89.74	$2.3986
Buzzards Bay Gas Co. 3/	5,364	369,498	68.9	922,489	171.98	2.4966
Total Elim. (2 cos.)	291,507	11,074,698	38.0	$26,600,383	$ 91.25	$2.4019
Total (7 cos.)	292,143	17,630,922	60.4	$33,666,769	$115.24	$1.9095

* Source: Annual Reports to Mass. D.P.U. for 1959.

1/ Cambridge Gas Co., New Bedford Gas and Ed. Lt. Co., and Fitchburg Gas and El. Lt. Co., included in Respondent's Ex. 90, were eliminated from this statement because of joint affiliated gas and electric operations.

2/ Boston Gas did not convert to straight natural gas until 1960. (Source: Brown's Directory of American Gas Companies - 74th Edition).

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DIVISION EXHIBIT NO. 4D
Div. Exhibit No. 4D

DIVISION EXHIBIT NO. 5 Div. Exhibit No. 5

NEWS DIGEST | FEDERAL POWER COMMISSION

VOL. XLIX - No. 27 WASHINGTON Thursday, February 9, 1961

40 NEW ENGLAND UTILITIES PLAN LIQUEFIED NATURAL GAS STORAGE PROJECT: (Journal of Commerce, February 7) -- By Lewis Brigham -- Forty gas utility firms in four New England States are pushing toward the construction of a natural gas liquefaction plant to help meet the area's chronic fuel price problem. Talked about for years, the formation of the New England Gas Pooling group last year is aimed at developing an underground refrigerated supply of liquefied methane during the low demand summer months to help offset heavy line withdrawals during the peak winter demand months. Impetus for the plan really originated three years ago when in the middle of the winter heating season the main line for one of the two natural gas transmission lines serving New England broke down. Additional impetus came from the dramatic success scored by the tanker, Methane Pioneer, which, outfitted with special aluminum and balsa wood tanks to hold the liquid methane at its required 258 degrees below zero during shipment, brought seven cargos of southwestern U. S. methane to the London, England, gas system.

Future developments for the Methane Pioneer plan of tankering liquefied methane await decision from the British Gas Council, but in the meantime, the New England gas companies are about to move themselves. At the same time, the American Gas Association has been conducting studies which will have a definite bearing on the New England program, even though carried out separately. The AGA research has been aimed at developing a more economic form of storing the methane which must be brought down to 260 degrees below zero in order to be kept in a liquid state. "Cyrogenic," or underground, storage is the key to methane's commercial usage in gas utility operations, according to the AGA, which now says the best storage prospect is a concrete vault as opposed to the prohibitively expensive aluminum and balsa wood design used on the Methane Pioneer for its seven voyages to London.

In fact the AGA hopes to erect a pilot storage unit this fall at a site yet to be determined using reinforced concrete and insulated walls. This will be a small 1,000-barrel unit for experimental purposes primarily. While the details of the New England plan with regard to storing the liquefied methane have not been made clear as yet, chances are it will embody the AGA concrete approach to an extent. This is particularly true inasmuch as New England lacks depleted gas fields where product can be stored as is the case in the southwest producing areas. Best bets for the location of both the gas liquefaction plant and storage area though is said by area utility observers to be somewhere near Worcester, Mass. which is central to the four states involved--Connecticut, Rhode Island, New Hampshire and Massachusetts. For the New England gas customers, as well as the firms themselves, the development could mean a real boom. Chronically beset with energy price problems during the winter months, the area is highly vulnerable to peak energy prices and line breakdowns.

The New England utilities would, of course, purchase the so-called "valley" gas, that is, the product available to the utilities in the summer when it is at its most plentiful and offered at its best rates. On this basis, the engineering firm of Stone and Webster is understood to have told the New England group that this "valley" gas would be available 15¢ per thousand cubic feet below the price indicated in earlier plans for Venezuela liquefied methane which could be tankered in during the winter to meet the season's peak demands. The transmission lines are expected to be enthusiastic over such an operation which would aid in leveling out the "peaks and valleys" of their seasonal demand pattern.

POWER PLANT AUTOMATION BREAKTHROUGH EXPECTED THIS YEAR: (New York Times, February 5) -- By Gene Smith -- This is supposed to be the year for the automated electric power plant. Both engineers and manufacturers of automation equipment that controls the various operations of a modern power plant feel that the actual breakthrough will come this year, either in Louisiana or on the Pacific Coast. The Louisiana installation should have the first chance. It is the Little Gypsy plant of the Louisiana Power and Light Company, an operating subsidiary of the Middle South Utilities System. This parent company already has logged successful operations in certain phases of the automation field. Only last week at the winter meeting of the American Institute of Electrical Engineers, Gerhard L. Hollander said that a process control computer in Louisiana Power's Sterlington station had run almost continuously

(Continued on next page)

day and night for six months in guiding a power plant's operations. It was out of use, for maintenance and related reasons, less than one percent of the time during this half-year test period. A spokesman for Middle South said that the Sterlington computer's performance actually had been "99.99 percent perfect." The computer was supplied by Daystrom, Inc., for the 225,000-kilowatt unit.

And Middle South also controls its three-state network--Arkansas, Louisiana and Mississippi--from a central dispatching office at Pine Bluff, Ark. The heart of this operation is a generation computer designed by Leeds & Northrup Company. The California chance will come later this year at the Southern California Edison Company's Huntington Beach generating station. The General Electric Company's computer department at Phoenix, Ariz., is supplying the computer equipment for what it described as "the world's most advanced computer--automated steam-electric power generating units." This computer-controlled system will start and stop the generating equipment, provide data-logging and alarm functions, make continuous performance calculations and maintain constant supervision of the generating units. This will mean continuous scanning to monitor conditions such as fuel and water flow, steam temperatures and pressures and electrical values.

Scanning must be done at rates up to 300 points a second, which is said to be the equivalent of digesting the contents of a 300-page book in five minutes. Each hour, 50 critical quantities that are needed for permanent records of operating conditions will be logged in a digital code and printed on an automatic typewriter in the form of common engineering terms. The new system is even equipped to handle automatically hot and cold starting, normal and emergency shutdowns and complete supervision of the boiler-turbine-generator systems. Utilities have long been users of computers for such relatively simple functions as billing and engineering department calculations and studies, as well as for automatic dispatching equipment to call on various power stations and units for best performance under all conditions. Industry spokesmen estimate 22 automation contracts have been signed for delivery of power-generating units linked with computers through 1964. Ebasco, the large consulting and engineering concern, expects to purchase at least six automation systems for power stations within six months. Thompson-Ramo-Wooldridge, Inc., reportedly has at least 18 propositions outstanding with consulting engineers and utilities for steam plant automation equipment.

The original reason for utilities to buy such equipment was simply the question of whether it was cheaper to spend dollars for equipment or hire more workers. L. F. Kennedy, manager of G. E.'s system protection and control engineering operation, explained that today, as the processes become more and more complex and larger amounts are invested in equipment, man is no longer able to absorb all that is going on and to react fast enough to control efficient operations. "An operator today would have to have a fantastic memory and a pair of roller skates to duplicate the ability of a computer to effectively analyze 1,200 bits of information every 15 seconds, as will be done with future power stations," he said. Mr. Kennedy predicted that before 1970 the power industry would see all units of 250,000 kilowatts and larger digitally-controlled. Smaller units will follow soon after. W. J. McLachlan, manager of G. E.'s electric utility systems engineering operation, explained that a 500,000-kilowatt steam station could realize capitalized savings of about $1,250,000 to $2,750,000 through complete automation. A spokesman for Leeds & Northrup estimated that a digital computer and minimum associated gear would cost about $250,000 if used for computation only. If control gear is added, the cost may be "two, three or ten times" as great depending on the end use, he said. Nevertheless, the company finds that about 20 percent of its over-all business comes from power plant instruments, controls and computers and that volume in this area is improving.

LAKE SUPERIOR DISTRICT POWER'S $3 MILLION BONDS ARE AWARDED: (Wall Street Journal, February 8) -- Chicago -- Lake Superior District Power Company awarded its $3 million of single-A rated first mortgage bonds to Salomon Bros. & Hutzler and Baxter & Co. The successful bid was 99.577 for a 4-5/8 percent coupon. That gave the utility, based in Ashland, Wis., an annual net interest cost of about 4.65 percent. Salomon Bros. and Baxter & Co. planned to release the bonds for general distribution, following compliance with Securities and Exchange Commission requirements, at 100.404, to yield 4.60 percent to maturity on February 1, 1991. Preoffering indications of retail interest in the issue at that price and yield were described as "from fair to good." The new 4-5/8s will be optionally redeemable by the utility at prices ranging from 105.03 down to par. Other bids came from Halsey, Stuart & Co., Inc., 99.414 for a 4-5/8 percent coupon; Kidder, Peabody & Co. and White, Weld & Co., jointly, 99.31 for a 4-3/4 percent coupon, and Robert W. Baird & Co., Inc., 99.949 for a 4-7/8 percent coupon. Lake Superior District Power will put the proceeds into its construction program.

1455 In the United States Court of Appeals for the First Circuit

No. 6332

NEW ENGLAND ELECTRIC SYSTEM ET AL., PETITIONERS,

v.

SECURITIES AND EXCHANGE COMMISSION, RESPONDENT

ON PETITION FOR REVIEW OF AN ORDER OF THE SECURITIES AND EXCHANGE COMMISSION

Before ALDRICH, *Chief Judge*, SWEENEY, *Chief Judge*, and WYZANSKI, *District Judge*

John R. Quarles, with whom *Richard B. Dunn*, *Richard W. Southgate*, *John J. Glessner, III*, and *Ropes & Gray* were on brief, for petitioners.

David Ferber, Solicitor, with whom *Philip A. Loomis, Jr.*, General Counsel, *Ellwood L. Englander*, Assistant General Counsel, *Martin D. Newman*, Attorney, and *Solomon Freedman*, Director, Division of Corporate Regulation, Securities and Exchange Commission, were on brief, for respondent.

OPINION OF THE COURT

June 4, 1965

ALDRICH, *Chief Judge*. This is a petition seeking to review and set aside a divestment order of the Securities and Exchange Commission pursuant to section 11(b)(1) of the Public Utility Holding Company Act of 1935, 15 U.S.C. § 79k(b)(1), requiring the petitioner, New England Electric System (NEES) to dispose of its gas utility properties by terminating its relationship with its eight subsidiary gas companies. The
1456 ultimate question in the case, which the Commission resolved against NEES, was whether divestiture would cause the loss of "substantial economies" within the meaning of the cited section.

Briefly, NEES is a registered holding company controlling, at the time of the hearing, fourteen electric utility subsidiaries and eight gas subsidiaries, with some 824,000 retail electric customers in the states of New Hampshire, Massachusetts, Rhode Island and Connecticut, and some 237,000 retail gas customers in Massachusetts. Seventy-eight percent of its gas customers are also served by the electric companies. Except for certain peaks and emergencies the gas distributed is natural gas supplied by pipe line companies from the southern United States. The gas companies have separate offices and management, but their top officers are responsible to the top officials of NEES. There was a lengthy hearing before an examiner at which NEES sought to show that the cost of divestment to the electric system would be $804,000 annually, and to the gas system, if operated as a single unit after severance, $1,098,000.[1] The Commission held, *inter alia*, that the financial effect upon the electric system was not a relevant inquiry, but that if it was it was not significant. This we do not reach. It also held, which we do reach, that the claimed financial consequences to the gas system were not substantial as it construed the statute, but that if they were they had not been adequately proven.

Basic to its decision, as the Commission recognized at the outset of its opinion, is the meaning of the Act and the standards which it imposed. Briefly, section 11(b)(1) required divestiture unless NEES could satisfy the provisos
1457 or exceptions[2] contained in sub-paragraphs, or clauses, (A), (B) and (C). Clauses (B) and (C) were admittedly met. Clause (A) reads as follows:

"(A) Each of such additional systems cannot be operated as an independent system without the loss of substantial economies which can be secured by the retention of control by such holding company of such system;"

Before considering whether the Commission's interpretation of this clause was correct we must determine what its inter-

[1] NEES' actual figure was $1,165,000, but the Commission reduced this by $67,000 as a result of a "revised basis of payments" authorized by it. NEES does not presently dispute this adjustment, but points out that the reverse adjustment must be made to the estimated electric system losses.

[2] The Commission uses the word "exceptions," and criticizes NEES' word "provisos." NEES' distinction, as we read it, was in response to a heavy burden of proof which the Commission sought to attach to exceptions. See fn. 4, *infra*.

pretation was. At the beginning of its opinion the Commission stated that to prevent divestiture NEES must show,

> "that the additional systems were integrated in nature and 'were so small that they were incapable of independent economic operation' and had a 'real economic need' for management together with the principal system. Congress was aware that some loss of economies would usually result from the separation of jointly controlled utility systems, but considered that continued joint management should be permitted only where separation would entail a loss of economies which would be substantial in the sense that they were important to the ability of the additional system to operate soundly." [Footnotes omitted.]

The Commission then quoted at length from a decision by the Court of Appeals for the District of Columbia,[3] 1458 from which it drew the conclusion that clause (A) required a "showing by clear and convincing evidence [4] that such additional system cannot be operated under separate ownership without the loss of economies so important as to cause a serious impairment of that system." Lastly, at the end of its opinion, the Commission concluded that on the record it was unable "to find that the gas companies could not be

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[3] *Engineers Public Service Co.* v. *S.E.C.*, 138 F. 2d 936, 944 (1943). This case is extensively relied on in the Commission's opinion without noting that certiorari was granted, 322 U.S. 723 (1944), and the decision subsequently vacated as moot. 332 U.S. 788 (1947). (This omission is remedied in its brief.) We do not know whether the view of the majority, or the dissent of Judge Soper, which accords with ours, would have ultimately prevailed.

[4] The Commission has been criticized before for using this phrase, the court allowing it to pass, however, on the ground that it meant no more than the fair preponderance of the evidence, the ordinary burden of proof. *Philadelphia Co.* v. *S.E.C.*, D.C. Cir., 1949, 177 F. 2d 720, 725. We do not agree. This phrase has a well recognized meaning, and is applied in special cases, such as fraud, *Lackawanna Pants Mfg. Co.* v. *Wiseman*, 6 Cir., 1943, 133 F. 2d 482, 486, or mistake, *Philippine Sugar Estates Devel. Co., Ltd.* v. *Philippine Islands*, 1918, 247 U.S. 385, 391, as applied in *Aetna Ins. Co.* v. *Paddock*, 5 Cir., 1962, 301 F. 2d 807, 811. The Commission is to be criticized for continuing to use this language, which by its tone suggests to laymen, as well as to lawyers, a heavy burden. We suspect, from other statements in its opinion, that it accurately revealed the Commission's approach. If so, in any future proceedings the Commission should readjust its receptivity as well as its phraseology.

soundly and economically operated independently of NEES, even assuming the validity of * * * [its] estimates."

Thus the statutory phrase, "cannot be operated as an independent system without the loss of substantial economies," was said to mean, "incapable of independent economic operation;" "important to the ability * * * to operate soundly;" "so important as to cause a serious impairment of that system;" and "could not be soundly and economically operated."

In *Middle South Utilities, Inc.*, 35 S.E.C. 1, 11 (1953), its most recent decision cited in its opinion for the support of its interpretation, the Commission ordered a divestment because it had not been shown that it would "cause the serious economic impairment of the system *or* that the gas properties could not operate effectively and efficiently under separate
1459 ownership." (Ital. suppl.) Since presumably the Commission did not intend to voice simultaneously two different standards we read the word "or" as introducing an explanation or equivalency. Essentially this second *Middle South Utilities* phrase is the sole standard that the Commission adopts in its brief before us.

Also may be noted the Commission's statement, in refutation of one of NEES' contentions, that "other independent gas utility companies in the state * * * nevertheless have been able to conduct their operations and, apparently, earn a fair return without the alleged advantages of common control with electric utilities by a holding company."

Taking the record as a whole we find its brief accurate, and that the Commission's interpretation is that a loss is not "substantial" unless it would render impossible "economical or efficient operation." [5]

As to the correctness of this interpretation we have not considered before the meaning of clause (A), and there is no uniformity of judicial view elsewhere. It is true that in *North American Co.* v. *S.E.C.*, 1946, 327 U.S. 686, 696–7, the court

[5] NEES suggests there is no practical difference between preventing economical operation and bankruptcy. The Commission does not address itself to this question. We assume it believes there to be a difference, but except to the extent suggested in fn. 7, *infra*, we cannot find from its opinion what the difference is, or, more important, what is the standard by which uneconomical operation is determined. The very serious problem which this would present we do not reach because we disagree with the Commission's basic interpretation.

referred to section 11(b)(1) as permitting retention only of "relatively small [companies] * * * unable to operate economically under separate management without the loss of substantial economies * * *." This was a passing summary, and did not purport to be an exact characterization. The precise meaning was not relevant to the constitutional questions then under consideration, and even if the court's language is not considered ambiguous we do not take it as an at-
1460 tempt to resolve possibly intricate questions of construction. We turn, therefore, to other considerations.

Although we do not regard the legislative history as determinative, we begin there as the Commission makes much of it. Its principal reliance is upon the concluding remarks of Senator Wheeler on the floor after the bill had finally passed both branches. Senator Wheeler stated, *inter alia,* that the act permitted a holding company to retain more than one integrated system only when the additional systems "* * * were so small that they were incapable of independent economical operation." 79th Cong. Rec. 14479 (Aug. 24, 1935). We may note, at the outset, that only by a most generous interpretation is this statement part of the legislative history. Having come afterwards, it could not have affected the voting. The best reason for considering it as evidence of Congressional intent, see *United States* v. *United Mine Workers,* 1947, 330 U.S. 258, 279–80; *Duplex Printing Press Co.* v. *Deering,* 1921, 254 U.S. 433, 477; *cf. State Wholesale Grocers* v. *Great Atlantic & Pacific Tea Co.,* D.C.N.D. Ill., 1957, 154 F. Supp. 471, 485, *rev'd on other grounds,* 258 F. 2d 831, *cert. den.* 358 U.S. 947, is accordingly absent.[6] Furthermore, coming from the leading Congressional

[6] See Hart and Sacks, The Legal Process: Basic Problems in the Making and Application of Law (tent. ed. 1958) 1285:

"The views of individual members of the legislature as to the meaning of a statute which were not officially communicated to the legislature prior to its enactment are not competent to be considered in determining the meaning which ought to be attributed to the statute."

Nor could it have invited a presidential veto, since the President was a known advocate of a strong bill. See 79 Cong. Rec. 3425–26, 3469–70, March 12, 1935 (Message to Congress); *id.* at 9042, June 11, 1935 (letter to Senator Barkley and Senator Wheeler); *id.* at 14164, Aug. 22, 1935 (letter to Representative Rayburn).

advocate of strict separation, see, *e.g.*, 79 Cong. Rec. 1525, Feb. 6, 1935; *id.*, 4903 (radio address of April 2, 1935); *id.*, 14470, Aug. 24, 1935 (remarks of Senator Norris), it would seem
1461 natural to regard it, at that stage of the proceedings, as a self-serving declaration. To the cynically minded it would seem to have been merely a post-contest attempt to raise the score, recapture what had been lost in the compromise with the House discussed *infra*, and to serve, just as is now being sought, to influence subsequent history. The best that should be said for Senator Wheeler's statement under these circumstances is that it is not to be given the weight to which it might have been entitled if made at another time.

The other pieces of legislative history related in the Commission's brief are a quotation from remarks by Representative O'Connor speaking "of 'a little power plant in Florida' or 'a little plant in Oklahoma' (79 Cong. Rec. 14168, Aug. 22, 1935)" and one from Representative Cooper, "who had opposed the motion, [and] had referred to systems retainable under Clause (A) as 'unprofitable companies * * * too weak to stand alone' (*id.* at 14165–14166)." Examination of Representative O'Connor's full statement rebuts the economic implication the Commission wishes us to attach to the word "little." It is evident that the remarks were addressed to geographical aspects, the absentee landlordism condemned in clause (B). It is true that Representative Cooper was speaking of clause (A). But it seems apparent that as an opponent of the bill he was strategically engaged in blackening it. According to him the compromise was no compromise whatever, a position demonstrably unsound. His interpretation of particular clauses must be read in that light. *Labor Board* v. *Fruit & Vegetable Packers & Warehousemen, Local 760*, 1964, 377 U.S. 58, 66.

A much more pertinent characterization of the phrase "substantial economies" is found in the statement of the House Managers attached to the conference report recommending
1462 passage of the compromise draft, that the retention of additional systems was to be permitted where there was a "real economic need." H.R. Rep. No. 1903, 74th Cong., 1st Sess., 71. This language, however, is itself ambiguous. Obviously there would be a real economic need to prevent a loss that would preclude efficient or effective operation. But there could also be said to be a real economic need to avoid any truly sizable financial loss notwithstanding the utility's

ability to absorb it and remainefficient in some absolute sense.[7] For reasons we now come to we believe the statute is to be given this more general meaning.

The declaration of legislative objectives is found in section 1(b). Subsection (1) thereof concerns improper accounting practices, capitalization, etc., that may injure investors. Subsection (2) refers to excessive charges and other effects of transactions among companies within a holding company system. It also, together with subsection (3), refers to impediments occasioned by the holding company device to state regulation. We quote in full the remaining subsections, which declare the public interest to be adversely affected.

> "(4) when the growth and extension of holding companies bears no relation to *economy of management and operation* or the integration and coordination of related operating properties; or
>
> "(5) when in any other respect there is *lack of economy of management and operation* of public-utility companies *or lack of efficiency and adequacy of service* rendered by such companies, or lack of effective public regulation, or lack of economies in the raising of capital." (Ital. suppl.)

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Pausing here we note in the underlined phrases two concepts, economy of management and operation, and efficiency (and adequacy) of service. The word "or" in clause (5) is clearly used in the disjunctive. This separate meaning is emphasized when we come to section 11(b)(1) clauses (A) and (C), *infra*. It will be sufficient to note here, for both present and future purposes, that the Commission has taken the word

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[7] We have already commented upon the Commission's failure to enunciate any standard beyond this broad generalization of economy or efficiency. See fn. 5, *supra*. Possibly its views are partly implied by the points made in its opinion when assuming that an annual loss of $1,098,000 had been adequately established. The first was that while this amount is larger, absolutely, than losses required to be accepted in any previous case, it is not larger relatively. Secondly, that the loss would be only 23.28% of gross income, and 29.94% of net income before federal income taxes. (The word "only" is ours.) Third, that there are "other independent gas utility companies in the state which nevertheless have been able to conduct their operations and, apparently, earn a fair return * * * and * * * compete effectively * * *." Finally, that it "would be entering the realm of speculation at this time to assume that rate increases would ensue from severance."

"efficient" from this use in connection with service and joined it with the phrase "economy of management and operation," and has then built out of the combination the concept that until a loss of economy and efficiency is shown to be total there has been no loss of substantial economies under clause (A) within Congressional concern. We may note, also, an omission which we take seriously, that on the sole occasion that the Commission quoted clause (4) it substituted asterisks for the phrase we have italicized, and, although the legislative meaning of economies is the specific matter under consideration, has never referred to it. Clause (5), likewise, is never mentioned. Conceivably this may be good advocacy. We do not think it candid administrative practice.

The definitions of "integrated public-utility systems" are found in section 2(a)(29). Subsection (A) defines an integrated electric system as one which, *inter alia*, "may be economically operated as a single interconnected and coordinated system." Subsection (B) defines a gas system as where,
1464 *inter alia*, "substantial economies may be effectuated by being operated as a single coordinated system." During argument we inquired the reason for this difference. No suggestion was forthcoming. The only reason apparent to us is that in order for electric companies to constitute an integrated public utility system they must meet a technical requirement not applicable to gas companies seeking to qualify as an integrated system. Unlike gas companies, *General Pub. Util. Corp.*, 1951, 32 S.E.C. 807, 834–35, electric companies must be "physically interconnected or capable of physical interconnection." Where this requirement is met, so that actual interchanges of power could be made to meet power requirements at different points in the system, it was enough for Congress that the system as a whole "may be economically operated as a single inter-connected and coordinated system." Assuming the other qualifications were met electric companies would not have to prove that system ownership would be cheaper than independent ownership, probably because this could safely be assumed where there would be a sharing of power.

Coming to section 11(b), the primary provision, subsection (1) requires that holding companies be restricted to a single

integrated public utility system except when subclauses (A), (B) and (C) are satisfied. For clarity we quote in full.

> "(A) Each of such additional systems cannot be operated as an independent system without the loss of substantial economies which can be secured by the retention of control by such holding company of such system;
>
> "(B) All of such additional systems are located in one State, or in adjoining States, or in a contiguous foreign country; and
>
> "(C) The continued combination of such systems under the control of such holding company is not
> 1465 so large (considering the state of the art and the area or region affected) as to impair the advantages of localized management, efficient operation, or the effectiveness of regulation."

These exceptions to section 11(b)(1) were added as a result of a compromise with the House. The original Senate bill had flatly restricted holding companies to a single integrated system. S. 2796, 74th Cong., 1st Sess. (1935). The House sought to permit as many systems as were consistent with the public interest. See H.R. Rep. No. 1318, 74th Cong., 1st Sess. 17 (1935). The Commission's then chairman objected that this would be intolerably indefinite. 79 Cong. Rec. 10838 (July 9, 1935) See also H.R. Rep. No. 1318, *supra*, at 45. Clauses (A), (B) and (C) were proposed as a compromise to establish "definite and concrete circumstances" where retention of more than one system would be allowed. Statement of House Managers, *supra*, at 70.

It is basic to the Commission's position that the phrase "substantial economies which can be secured by the retention of control" in clause (A) is fundamentally different from "substantial economies [that] may be effectuated by being operated as a single coordinated system" in section (29)(B).[8]

[8] The Commission is committed to this, and expressly so recognizes in its brief, because it rejected certain important evidence offered by NEES solely on the ground that the eight gas companies were conceded to be "a single integrated system." Since the Commission could not, either in good conscience or in law, accept as a concession a matter so fundamental, not only to the present proceedings, but for the future, if it were contrary to the fact, it stands that the Commission feels that saving $329,400 annually by integrating the eight gas companies is effectuating substantial economies under section (29)(B), but that $1,098,600 annually is not substantial economies under clause (A).

Such a contention, of course, is opposed to the common principle that the same words in different portions of an act
1466 are presumed to have the same meaning. In this case they are exactly the same.[9] To overcome the presumption calls for an affirmative showing.[10]

Furthermore, we find the Commission's interpretation of clause (A) opposed to the initial statement of the purposes of the Act, *supra*, the tenor of which was that holding companies had been found uneconomical to investors and to the public. It is not inconsistent with this to say that systems which do not offend in this respect, or in the other respects defined in clauses (B) and (C), should be continued instead of broken up, and that occasioning a loss of impressive proven economies was not the Congressional purpose. This was a business reorganization act designed to produce a healthier economic structure in a vital industry. It established what, in the opinion of Congress, accomplished the best overall conditions. At the same time, Congress remained receptive to what, in a particular instance and within the limits established by clauses (B) and (C), might be affirmatively shown to be a more economical arrangement. We hold that clause (A) called for a business judgment of what would be a significant loss, not for a finding of total loss of economy or efficiency. *Louisiana Pub. Serv. Comm'n* v. *S.E.C.*, 5 Cir., 1956, 235 F. 2d 167, *rev'd on jurisdictional grounds*, 353 U.S. 368.

We are confirmed in this view by the fact that not only do clauses (B) and (C) contain additional conditions of
1467 retention, so that clause (A) need not be interpreted so as to cover the entire Congressional intent, but that these other clauses relate back fully to counterparts of the declarations of purpose made in section 1(b), and the attempts

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[9] The Commission's brief goes to some length in emphasizing the word "loss" in section 11(b)(1)(A). Sections 2(a)(29)(B) and 11(b)(1)(A) are not incomparable because the former speaks in terms of effectuating and the latter in terms of losing. The important comparison is the word "effectuated" in the one section and "secured" in the other. Both relate directly to "substantial economies."

[10] In a special effort to make this showing counsel argues that there is a policy in the Act against an electric utility system being combined with a gas system. The short answer to this is that neither the Act, nor the Commission itself, says so. Since, however, counsel's argument is extensive we will reply in kind, but in order not to prolong this footnote we will do so in an appendix, *infra*.

to effectuate those purposes through the definitions made in section 2(a)(29), *supra*. Clause (A) would do the same were it not for the special restricted meaning that the Commission seeks to give it. The Commission, in other words, has attached to "substantial economies" in this one particular place a special meaning that nothing in the Act points to, and which, in fact, destroys its symmetry.[11]

It might not be inappropriate to conclude with the quotation with which the Commission began a section of its brief. "As was stated [the brief says] in the report of the National Power Policy Committee: '[I]ntensification of economic power beyond the point of proved economies not only is susceptible of grave abuse but is a form of private socialism inimical to the functioning of democratic institutions and the welfare of a free people.' * * * H. Doc. No. 137, 74th Cong., 1st Sess. 4 (1935), appended to S. Rep. No. 621, 74th Cong. 1st Sess." We cannot think that "proved economies" any more than "substantial economies," mean anything other than economies which in ordinary business parlance and by ordinary business standards are of a substantial nature, considering, of course, the size of the companies to which the economies relate.[12]
1468 Clearly that was what was meant elsewhere in the Act.

If in clause (A) Congress meant, instead, "cannot be operated efficiently as an independent system" it could readily have done so not only more clearly, but in fewer words.

The Commission's only answer is "the policy of the Act." We think the policy of the Act is to be found in the whole Act, not in one part. NEES has the burden of proving that it falls within an exception. This is enough, without a forced reading into that exception of some special meaning.

We regret the length of this discussion. Since, however, we find the Act not only consistent, but entirely responsive to

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[11] Drawing an equivalence between the proviso contained in clause (A) to section 11 and the corresponding requirements for an integrated gas system under section 2(a)(29)(B) nullifies no technical requirements in the definition of an integrated gas system because there are none. The definition of an integrated electric system under section 2(a)(29)(A) does contain some technical requirements, as has been pointed out, but these, also are not nullified by our interpretation of clause (A) since it remains stricter than section 2(a)(29)(A)'s requirement that the electric system "may be economically operated."

[12] In this case the claimed losses are over 23% of gross income. See fn. 7 *supra*.

analysis, we feel such analysis called for in fairness to those persons, whether investors or consumers,[13] who must absorb perhaps a million dollars a year (quite apart from over $800,000 allegedly lost to the electric system) which the Commission feels insubstantial.

The Commission having applied the wrong standard, its decision must be reversed unless on the record there could have been no finding in NEES' favor on the appropriate standard. We think clearly there could have been. NEES' case was based essentially upon a study made for it by Ebasco Services, Inc., (Ebasco), a management consultant which the Commission found possessed extensive experience in the utilities field. No rebuttal evidence, other than some exhibits, was offered on behalf of the Commission, which grounded its rejection of the report, to the extent that it did reject it, solely on criticism of the report's conclusions in the light of NEES' evidence or its own expertise. Its specific criticisms related to that por-
1469 tion of the report which dealt with certain costs totalling $472,100 or, more specifically, for the most part, customer and accounting costs included therein, for which the Ebasco estimate was $415,600. The first criticism concerned billing. The circumstances were these. Ebasco's original study was made on the assumption that the gas companies would be individually managed. On this hypothesis it naturally assumed that each company would conduct separate customer billing. When the Commission took the position that the gas companies constituted a single integrated system and should be sold as such, Ebasco was required to reduce its estimate by the amount attributable to operating the gas companies individually rather than as a unit. It made no reduction with respect to customer billing.

On this subject NEES called three witnesses. One Quig, a representative of Ebasco with ample qualifications, testified to certain accounting savings that could be effected if the gas companies were operated collectively rather than individually. He stated, however, that Ebasco would not recommend, at

[13] The Commission's finding it significant that it was sufficiently shown that this loss would require an increase in rates "at this time," fn. 7, *supra*, not only disregards the fact that the cost of doing a utility business normally is passed on to consumers eventually, but the fact that one of the purposes of the Act was to benefit legitimate investors.

least at the outset, centralization of certain matters, including billing; that a continuing study might show that further centralization would prove useful, but that it was by no means clear that economy lay in that direction, and that it would depend on such factors as business growth, new developments in mechanization, etc. Subsequently one Dalbeck, the principal officer of NEES' gas division, testified that it was conceivable that centralized billing might be effected to some degree, but that in his opinion it was not really important cost-wise; that he had made many studies of customer accounting procedures and had never found any real economies in centralization of billing. Thereafter one Johnson, an Ebasco representative with particular experience in customer accounting, testified that a detailed study would have to be made, which Ebasco had not done; that based upon his experience he
1470 had considered centralized billing for the combined operation and had made the judgment that there would be no economy, or at least "any substantial savings." The witness was cross-examined at length and showed a wide knowledge not only of specialized mechanical equipment in this area and the problems involved, but also of the particular practices of a large number of named utilities in various parts of the country. He recognized that in many instances centralized billing prevailed, but continued to express doubts as to how much was saved thereby.

The Commission's response to this was to point out that some of the NEES gas companies presently combined their billing with the electric companies in their areas. This matter had been explained by NEES' witnesses, who pointed out, *inter alia,* the duplication of customers, which would not exist in the case of gas companies operating alone. The Commission concluded, however, that NEES had not "given any satisfactory reason why at least some form or forms of combined billing procedure could not be employed advantageously by the gas companies, in light of the fact that their aggregate of 237,000 customers is located in a relatively compact area."

We have serious doubts as to the extent that the Commission is entitled to disregard an opinion on a matter obviously requiring expert, specialized knowledge with no further evidence before it than what had been considered by the accepted expert. *Cf. United Shoe Mach. Corp.* v. *Industrial Shoe Mach. Corp.*, 1 Cir., 1964, 335 F. 2d 577, 579, *cert. den.* 379 U.S. 990;

Security-First National Bank v. *Lutz*, 9 Cir., 1963, 322 F. 2d 348, 355; *Alvary* v. *United States*, 2 Cir., 1962, 302 F. 2d 790, 794; *Cullers* v. *Commissioner*, 8 Cir., 1956, 237 F. 2d 611, 616. This is not a matter on which a body having such broad jurisdiction as the Commission can have detailed expertise upon which to base affirmative findings. Compare *Market*
1471 *St. Ry.* v. *Railroad Commission*, 1945, 324 U.S. 548, 560.

Without finally passing upon this point, since the case must go back in any event, we suggest that on this record the maximum the Commission was warranted in inferring was that the difference in costs between separate and combined billing would not, if significant at all, constitute a sizable portion of the total added billing expense.

This brings us to what was the added billing expense, and hence the amount of error attributed to the Ebasco report because of its failure to assert the saving which, in the Commission's opinion, could be effected by having centralized billing. The Commission concluded merely that Ebasco's failure caused the estimate to be "overstated." It did not concern itself with discovering even what were the total increased billing costs, let alone the portion (obviously not the whole) which might be saved if centralized billing were adopted. It did find that the increased billing costs estimated for two of the eight gas companies, billing singly after divestiture, was $34,700 for the two. These companies covered more than half of NEES' gas customers. On a pro rata basis this would make the total billing increase for all companies $60,000. While doubtless such a projection is not precise, it seems significant that the Commission was not sufficiently interested to make any at all. Under the circumstances we do not think it unreasonable for us to point out that while the Commission was purportedly criticizing a cost estimate of over $400,000, strictly it was speaking of perhaps $60,000, only a portion of which could have been overstated.

We might have more sympathy with some, but not all, of the Commission's criticism of certain other alleged accounting disparities. Frankly, we are not sufficiently versed, nor do we find the record sufficiently helpful, to permit our analyzing them in every detail. However, it has not been
1472 contended that, even cumulatively, they remove from the Ebasco $472,000 cost estimate many sizable items.

After discussing the above matters the Commission said,

> "In view of respondent's burden of proof and the absence of a persuasive explanation on the record, Ebasco's failure to consider employment of combined billing procedures and its inadequately explained disparate treatment of certain effects of severance on the gas and electric companies, respective, substantially impair the credibility and preclude the acceptance of its estimate of a $472,100 increase in treasury and accounting costs and, in turn, of its over-all estimate of increased costs (of which that figure is a material part) in the determination of whether severance would result in a substantial loss of economies."

If this constitutes a finding that the deficiencies which the Commission believes it has found are so serious that the Commission was entitled to reject the balance of the report from that very fact, we cannot agree. The doctrine of *"falsus in uno, falsus in omnibus,"* so far as it has any value, ordinarily applies to cases of deliberate falsehood. See 3 Wigmore, Evidence § 1013 (3d ed. 1940). The Commission has not suggested, and we see no possible basis for suggesting, that the discrepancies it complains of indicate bias or dishonesty. Absent a finding that the errors found are related to, or infect, other matters not directly discredited, if the *"falsus in uno"* doctrine, or a corollary, is to be used on any further basis to impeach an expert's report, it must be shown that the errors are so serious that they indicate substantial carelessness, or otherwise impugn the expert's qualifications. See, *e.g.*, *Hoag* v. *Wright*, 1903, 174 N.Y. 36, 43; 66 N.E. 579, 581. Again, the Commission made no such findings. If there was a ground for them it has not been suggested. Indeed, the Commission demonstrated its
1473 confidence in Ebasco elsewhere by accepting its cost estimates as the basis for concluding that the gas companies constitute an integrated system.

On the record there is a large, residual showing in the Ebasco report. Even at minimum it is $1,098,000 minus some fraction of $472,000. However, we do not think it presently appropriate for us to consider whether such minimum showing meets our interpretation of "substantial economies." We do state, however, that on remand the Commission must address itself to this problem by making specific findings, and not content itself with general conclusions. One illustration of this will suffice. The Commission states in its brief that it "had

the right to consider competitive advantages of separation in offsetting alleged losses of economies." We do not question this. What we do question is the Commission's failure to find or articulate any specific or approximate financial benefit that such a change would occasion. Free competition, as the Act recognizes, is normally beneficial. It is not necessarily so, nor in any assumed amount. The various automotive divisions of General Motors seem to do very well. More close to home, the Massachusetts Department of Public Utilities, which voices no apparent criticism of a number of combined local gas and electric companies within the Commonwealth, affirmatively appeared in opposition to the Commission's proceeding in the present case. The Commission states that the Department's views have been "carefully considered," but it goes no further. If the Commission is of opinion that substantial gains will accrue to the gas system by placing it in competition with the electric companies rather than, in part, under the same roof, specific findings should be made, and not just a general reference to the advantages of competition. This is particularly called for where the evidence shows that NEES has made a special effort to obtain for its gas system many of the benefits of independence.

1474 *Decree will be entered vacating the order of the Commission and remanding for further action not inconsistent herewith.*

APPENDIX

In the Commission's brief counsel argues that section 11(b) embodies a federal concern with use of the holding company form to combine a gas system with an electric system. There are several answers to this. In the first place, it is too specialized an approach. The meaning of this section and of subclauses (A), (B) and (C) must be the same whether the principal system and the additional systems are of like nature or are different. "Substantial economies," in other words, should have the same connotation in the one case as in the other.

Secondly, nowhere in the Act is there a condemnation of the retention of gas and electric systems, provided the tests contained in clauses (A), (B) and (C) are met. To the contrary, section 8 prohibits a holding company's acquisition of gas and electric utilities serving the same territory, where state law pro-

hibits combined gas and electric operations, without express approval of the state commission. If anything, this is a negative pregnant, as the Commission has recognized and the legislative history makes clear. See *Northern States Power Co.*, 1954, 36 S.E.C. 1, 8; S. Rep. No. 621, 74th Cong., 1st Sess., 29–30; H.R. Rep. No. 1318, *supra*, at 14–15; Report of National Power Policy Committee, H.R. Doc. No. 137, 74th Cong., 1st Sess., 10 (1935), appended to S. Rep. No. 621, *supra*, at 59; Hearings Before House Committee on Interstate and Foreign Commerce on H.R. 5423, 74th Cong., 1st Sess., 330 (1935) (statement of Rep. Rayburn). How far such an infer-
1475 ence may be carried in the light of the fact that section 10(c), which prescribes the standards for acquisitions, expressly incorporates the retention standards, and requires further that an acquisition tend toward the development of an integrated system, may be questioned. *Cf. American Water Works & Elec. Co.*, 1937, 2 S.E.C. 972, 983 & n. 3; *Columbia Gas & Elec. Corp.*, 1941, 8 S.E.C. 443, 462–63; *American Gas & Elec. Co.*, 1946, 22 S.E.C. 808, 815. But at least we find neither there nor elsewhere in the Act a general policy of opposition to gas and electric company joinder.

Nor, if the matter could be thought to be illuminated by administrative practice, has the Commission previously made such an interpretation, nor does it now. In its opinion the Commission stated, "We do not take the view that the Act expresses a federal policy against combined gas and electric operations as such." Counsel's attempt to explain this away by saying the Commission's phrase "as such" meant simply that the Commission was disclaiming interest when the interstate holding company form was not employed, attributes to the Commission the banality that it was not claiming jurisdiction in those cases where obviously it does not have it. We believe the Commission was saying something more than this, and that counsel, in the brief, is merely seeking some new ground to support the Commission's result.

1476 In the United States Court of Appeals for the First Circuit

Judgment—JUNE 4, 1965.

This cause came on to be heard upon petition to review and set aside an order of the Securities and Exchange Commission, and was argued by counsel.

Upon consideration whereof, It is now here ordered, adjudged and decreed as follows: The order of the Commission is vacated, and the case is remanded for further action not inconsistent with the opinion filed today.

By the Court:

/s/ ROGER A. STINCHFIELD,
Clerk.

Approved,

/s/ ALDRICH, *Ch. J.*

1477 [Clerk's Certificate to foregoing transcript omitted in printing.]

1479 Supreme Court of the United States

October Term, 1965

No. 636

SECURITIES AND EXCHANGE COMMISSION, PETITIONER

v.

NEW ENGLAND ELECTRIC SYSTEM, ET AL.

Order allowing certiorari—December 13, 1965

The petition herein for a writ of certiorari to the United States Court of Appeals for the First Circuit is granted.

And it is further ordered that the duly certified copy of the transcript of the proceedings below which accompanied the petition shall be treated as though filed in response to such writ.

U.S. GOVERNMENT PRINTING OFFICE: 1966